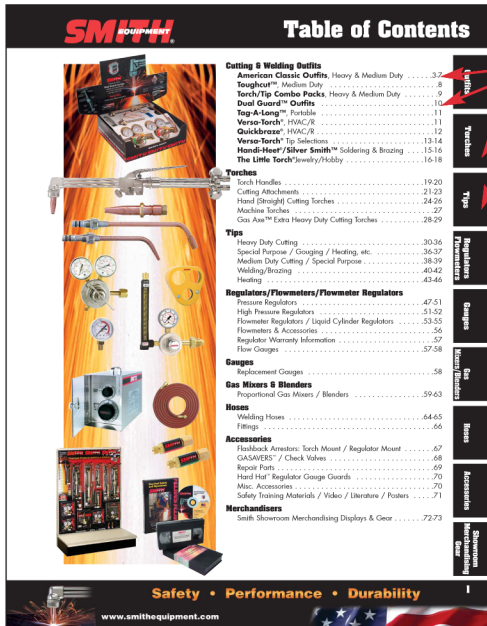




How to use the Smith Interactive Catalog

There are several different ways you can navigate through the interactive catalog.



In the Table of Contents you can click on the tabs to take you to that particular section of the catalog. You can also click on the different page numbers.

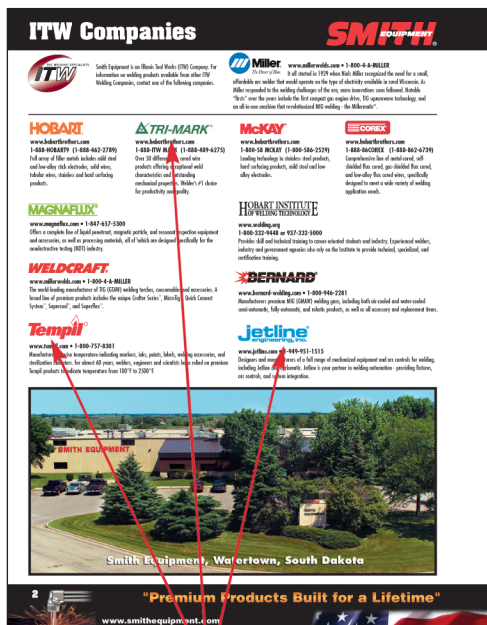
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You can zoom in and out on different items that you would like to view closer by using the magnifying glass, typing in different percentages, or using the page icons boxed at the top.

You can use the arrows or type in page numbers. **Note: If you choose to type the page numbers they are three pages ahead of the actual catalog pages.**

You can scroll with the side bar or with the wheel that some mouses are equipped with.



You can click on different websites through out the catalog and they will take you to that particular site as long as you have internet access.

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An American Classic



FULL-LINE CATALOG



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& Tested in Watertown,
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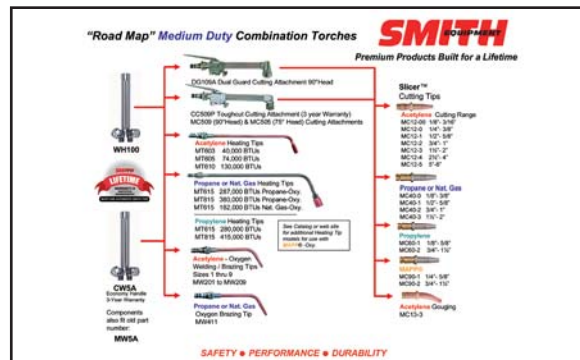
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"Easy to Use Online Product Selection Guide"

Easily select the right outfits, torches and regulators for your application. Also, a road map will help you identify the proper cutting, heating or welding tips for the job at hand as well as the desired fuel gas. The guide makes it simple for your customers to select just the right equipment for their application. It will also help distributor sales personnel to accurately recommend the right equipment reducing product returns and provide greater customer productivity and satisfaction.



Smith Equipment

has been manufacturing top quality oxy-fuel cutting, welding and heating equipment since 1917. Smith products are safety engineered and 100% tested. A lifetime of top performance is engineered into every Smith torch; **we guarantee it!** Smith Equipment has built its reputation by developing high-quality tools for professional cutters and welders. The company's engineering focus is the basis for equipment that helps improve safety and reliability, as well as on-the-job performance.

Lifetime Performance

Smith Equipment will repair or replace any Lifetime torch handle, cutting attachment or cutting torch that needs repair resulting from normal wear and tear or from defects in material or workmanship for as long as you own the torch. Just return the equipment to Smith, and we'll repair or replace it, free. See your Smith Distributor for complete details. The Smith Lifetime Warranty is the longest and strongest in the industry. No other manufacturer comes close.

Note: Torches used with non-Smith original components, such as tips or repair parts, will not be eligible for lifetime warranty coverage.



Where we part company with our competition.

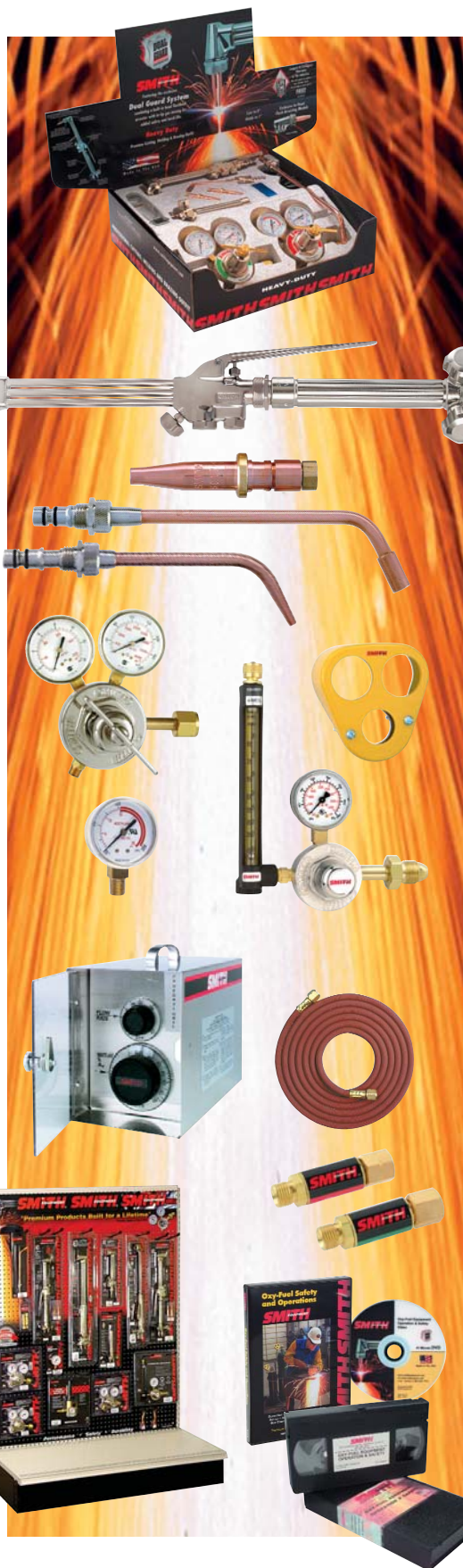
Smith Equipment has built its reputation by developing high-quality tools for professional welders. The company's engineering focus is the basis for equipment that helps improve safety and reliability, as well as on-the-job performance.



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Cutting & Welding Outfits

American Classic Outfits , Heavy & Medium Duty	3-7
Toughcut™ , Medium Duty	8
Torch/Tip Combo Packs , Heavy & Medium Duty	9
Dual Guard™ Outfits	10
Tag-A-Long™ , Portable	11
Versa-Torch® , HVAC/R	11
Quickbraze® , HVAC/R	12
Versa-Torch® Tip Selections	13-14
Handi-Heet®/Silver Smith™ Soldering & Brazing	15-16
The Little Torch® Jewelry/Hobby	16-18

Torches

Torch Handles	19-20
Cutting Attachments	21-23
Hand (Straight) Cutting Torches	24-26
Machine Torches	27
Gas Axe™ Extra Heavy Duty Cutting Torches	28-29

Tips

Heavy Duty Cutting	30-36
Special Purpose / Gouging / Heating, etc.	36-37
Medium Duty Cutting / Special Purpose	38-39
Welding/Brazing	40-42
Heating	43-46

Regulators/Flowmeters/Flowmeter Regulators

Pressure Regulators	47-51
High Pressure Regulators	51-52
Flowmeter Regulators / Liquid Cylinder Regulators	53-55
Flowmeters & Accessories	56
Regulator Warranty Information	57
Flow Gauges	57-58

Gauges

Replacement Gauges	58
--------------------	----

Gas Mixers & Blenders

Proportional Gas Mixers / Blenders	59-63
------------------------------------	-------

Hoses

Welding Hoses	64-65
Fittings	66

Accessories

Flashback Arrestors: Torch Mount / Regulator Mount	67
GASAVERS™ / Check Valves	68
Repair Parts	69
Hard Hat™ Regulator Gauge Guards	70
Misc. Accessories	70
Safety Training Materials / Video / Literature / Posters	71

Merchandisers

Smith Showroom Merchandising Displays & Gear	72-73
--	-------

Outfits

Torches

Tips

Regulators
Flowmeters

Gauges

Mixers/Blenders
Gas

Hoses

Accessories

Showroom
Merchandising
Gear



Smith Equipment is an Illinois Tool Works (ITW) Company. For information on welding products available from other ITW Welding Companies, contact one of the following companies.



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It all started in 1929 when Niels Miller recognized the need for a small, affordable arc welder that would operate on the type of electricity available in rural Wisconsin. As Miller responded to the welding challenges of the era, more innovations soon followed. Notable "firsts" over the years include the first compact gas engine drive, TIG squarewave technology, and an all-in-one machine that revolutionized MIG welding - the Millermatic®.

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Offers a complete line of liquid penetrant, magnetic particle, and resonant inspection equipment and accessories, as well as processing materials, all of which are designed specifically for the nondestructive testing (NDT) industry.

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Manufacturers premium MIG (GMAW) welding guns, including both air-cooled and water-cooled semi-automatic, fully-automatic, and robotic products, as well as all accessory and replacement items.

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Designers and manufacturers of a full range of mechanized equipment and arc controls for welding, including Jetline and Cyclomatic. Jetline is your partner in welding automation - providing fixtures, arc controls, and system integration.



Smith Equipment, Watertown, South Dakota

American Classic - Cutting, Welding & Heating Outfits

Outfits



HBA-40510

HEAVY DUTY CUTTING, WELDING & HEATING OUTFITS

CUTS UP TO 8" (203mm)
WELDS UP TO 1/2" (13mm)

(With optional tips)

These premium heavy duty outfits feature Smith's proven in-tip gas mixing technology. This greatly improves operator safety and increases torch life. Torches are covered by Smith's "LIFETIME" WARRANTY, the longest and strongest in the industry. Smith regulators are covered by a 3 year limited warranty. The outfits feature rugged, highly accurate brass regulators with polished brass gauges for corrosion resistance and shatter resistant polycarbonate lenses. Outfits are complete with safety and operations manual. *All outfits include 2 cutting tips, welding tip, heating tip, tip cleaner.*



HBA-40510/HBA-40300



HB-40510/HB-40300



HB-30510

NOTE: All outfits packaged in outfit box shown above.

Stock No.	Fuel Gas	Torch Handle	Cutting Attachment	Cutting Tips	Welding Tip	Heating Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories
HBA-40510	Acetylene	WH200	SC209	SC12-1 SC12-2	SW205	ST602	40-175-540 CGA 540	40-15-510 CGA 510	lighter, goggles, 25 ft. (7.6m) 1/4" (6mm) hose, H743 flashback arrestors, tip cleaner
HBA-40300								40-15-300 CGA 300	
HB-40510								40-15-510 CGA 510	tip cleaner & manual
HB-40300								40-15-300 CGA 300	
HB-30510 (Medium Duty Regulators)							30-100-540 CGA 540	30-15-510 CGA 510	

NOTE: Capacity with tips supplied in outfit: cuts up to 1-1/4" (32mm), welds up to 1/8" (3mm). Torch Handle includes reverse flow check valves.

Safety • Performance • Durability

Outfits

American Classic – Cutting, Welding & Heating Toolbox Outfits

HEAVY DUTY TOOLBOX OUTFITS

COMBINATION OUTFIT
CUTS UP TO 8" (203mm)
WELDS UP TO 1/2" (13mm)

HAND TORCH OUTFIT
CUTS UP TO 12" (305mm)

(With optional tips)

These premium heavy duty outfits feature a rugged, high impact plastic toolbox with steel latches to safely transport oxy-fuel equipment. Outfits also feature Smith's proven in-tip gas mixing technology. This combination greatly improves operator safety and increases torch life. Torches are covered by Smith's "LIFETIME" WARRANTY, the longest and strongest in the industry. Smith regulators are covered by a 3 year limited warranty. The outfits feature rugged, highly accurate regulators with shatter resistant polycarbonate gauge lenses. Outfits are complete with safety and operations manual.



HTAS-30510/HTAS-30300
Hand Torch Outfit

Minimum Order:
Two of same part number
(shipped 2 to a carton)

NOTE: Capacity with tips supplied in Acetylene outfits: cuts up to 1-1/4" (32mm). Torch Handles include reverse flow check valves.



HTA-30510/HTA-30300
Combination Torch Outfit



Stock No.	Fuel Gas	Torch Handle	Cutting Attachment	Cutting Tips	Welding Tip	Heating Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories
HTA-30510	Acetylene	WH200	SC209	SC12-1 SC12-2	SW205	ST602	30-100-540 CGA 540	30-15-510 CGA 510	lighter, goggles, 3/16" (5mm) twin hose, tip cleaner, operations manual & H743 flashback arrestors. All LP outfit includes "T" grade hose. Toolbox #15572
HTA-30300								30-15-300 CGA 300	

Stock No.	Fuel Gas	Cutting Torch	Cutting Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories
HTAS-30510	Acetylene	SC229	SC12-1 SC12-2	30-100-540 CGA 540	30-15-510 CGA 510	lighter, goggles, 3/16" (5mm) twin hose, tip cleaner & operations manual Toolbox #15572
HTAS-30300					30-15-300 CGA 300	

American Classic – Hand Cutting Torch Outfits

Outfits



XHBS-40510

HEAVY & EXTRA HEAVY DUTY HAND CUTTING TORCH OUTFITS

CUTS UP TO 24" (610mm)

(HT3 SERIES CUTS UP TO 12" (305mm))

(With optional tips)

Hand cutting torch outfits are built for the toughest jobs. They feature the cutting torch with a reversible cutting lever and an ease-on oxygen design for smooth starts and restarts. The torch is also designed with a heavy wall manganese bronze head for durability and resistance to heat warping. All torches are covered by Smith's "LIFETIME" WARRANTY. The outfits feature rugged, highly accurate regulators with shatter resistant polycarbonate gauge lenses.

Smith regulators are covered by a 3 year limited warranty. Outfits are available with premium heavy or medium duty regulators.

**1 Year
Warranty**



HT3-H510S/HT3-H300S



XHTAS-30510 - Hand Torch Outfit

Stock No.	Fuel Gas	Cutting Torch	Cutting Tips	Oxygen Regulator	Fuel Gas Regulator	Accessories
XHTAS-30510 (Toolbox Outfit)	Acetylene	SC929	SC12-1 SC12-2	30-100-540 CGA 540	30-15-510 CGA 510	lighter, goggles, 3/16" (5mm) twin hose, tip cleaner, operations manual, H743 flashback arrestors. Toolbox #15572
XHBS-40510*			SC12-1	40-175-540 CGA 540	40-15-510 CGA 510	H743 flashback arrestors
HT3-H510S*		SC229	SC12-2	40-175-540S CGA 540	40-15-510S CGA 510	H190 Hard Hat™ Gauge Protectors
HT3-H300S*					40-15-300S CGA 510	

Outfits (excluding the Toolbox) do not include accessories (goggles, hose and striker) **NOTE:** *Shipped in plain box.

NOTE: Toolbox outfits minimum order - 2 of same part No., ship 2 to carton.

Safety • Performance • Durability

Outfits

American Classic – Cutting, Welding & Heating Toolbox Outfits

MEDIUM DUTY CUTTING, WELDING & HEATING OUTFITS

CUTS UP TO 6" (153mm) WELDS UP TO 3/8" (9.8mm)
(With optional tips)

These premium outfits feature quality construction throughout and are built to provide reliability and extended service. **Toolbox Outfits** feature rugged, high impact plastic toolbox to safely transport oxy-fuel equipment. Outfits feature Smith's proven in-tip gas mixing technology. This combination greatly improves operator safety and increases torch life. Torches are covered by Smith's "LIFETIME" WARRANTY, the longest and strongest in the industry. The outfits feature rugged, highly accurate regulators. Regulators are backed by a 3 year limited warranty. Outfits are complete with safety and operations manual.

All outfits include 2 cutting tips, welding tip, heating tip and reverse flow check valves.



MBA-30510



**MBA-30510/
MBA-30300**



MB-30510



MTA-30510/MTA-30300

Stock No.	Fuel Gas	Torch Handle	Cutting Attachment	Cutting Tips	Welding Tip	Heating Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories
MBA-30510	Acetylene	WH100	MC509	MC12-0 MC12-1	MW205	MT603	30-100-540 CGA 540	30-15-510 CGA 510	lighter, goggles, 3/16" (5mm) twin hose, tip cleaner, flashback arrestors & operations manual Toolbox outfits include box #15965 Flashback Arrestors & Tip Cleaners
MBA-30300								30-15-300 CGA 300	
MTA-30510 (Toolbox Outfit)								30-15-510 CGA 510	
MTA-30300 (Toolbox Outfit)								30-15-300 CGA 300	
MB-30510								30-15-510 CGA 510	

NOTE: Capacity with tips supplied in Acetylene outfits: cuts up to 5/8" (16mm), welds up to 1/8" (3mm) Reverse flow check valves - torch handle mount.
NOTE: Toolbox outfits minimum order - 2 of the same part No., ship 2 to a carton.

With Standard SC & MC Style Cutting Assemblies

Outfits



**HEAVY DUTY OUTFIT
SC-510T/SC-300T**

CLASSIC HEAVY & MEDIUM DUTY TOOLBOX OUTFITS

OXYGEN-ACETYLENE COMBINATION OUTFITS

HEAVY DUTY CUTS TO 8" (203mm)

MEDIUM DUTY CUTS TO 6" (153mm)

(With optional tips)

These premium outfits feature a rugged, high impact toolbox to safely transport the outfit components. Outfits include the traditional, lighter weight SC & MC style cutting attachments. Cutting attachments and torch handles are covered by Smith's "LIFETIME" WARRANTY, the very best in the industry. Regulators are covered by a 3 year limited warranty. These outfits also feature rugged, highly accurate Series 30 regulators with shatter resistant, polycarbonate gauge lenses. Regulators are designed with Smith's Sure-Seal™ high pressure seat technology for extended regulator life. An American Classic Outfit.

Outfits include reverse flow check valves, heating tip, welding tip, cutting tip and accessories. Safety and Operations manual also included.



**MEDIUM DUTY OUTFIT
MC-510T/MC-300T**



**Regulators Covered by a
3 Year Limited Warranty**

MC Series Toolbox # 15965

SC Series Toolbox # 15572

Stock No.	Fuel Gas	Torch Handle	Cutting Attachment	Cutting Tip	Welding Tip	Heating Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories
MC-510T	Acetylene	WH100	MC509	MC12-1	MW205	MT603	30-100-540	30-15-510	lighter, goggles, 3/16" (5mm) twin hose, check valves & operations manual
MC-300T								30-15-300	
SC-510T		WH200	SC209	SC12-1	SW205	ST602		30-15-510	
SC-300T								30-15-300	

NOTE: Toolboxes ship two of the same per carton.

Safety • Performance • Durability

Toughcut™ Outfits

TOUGH CUT™
CUTTING & WELDING OUTFITS
CUTS UP TO 6" (153mm)
WELDS UP TO 3/8" (9.8mm)

(With optional tips)

Versatile "TOUGH CUT" cutting and welding outfits include many features found on more expensive outfits. The TOUGH CUT series is perfect for a multitude of applications such as farm, ranch, hobby, automotive, refrigeration, light fabrication, and repair. Outfits feature rugged, reliable Smith Series 30 medium duty regulators. Torch and regulators covered by a 3 year limited warranty.

Complete operation and instruction manual also included.

All outfits include 1 cutting tip, welding tip, goggles and reverse flow check valves. MB55 Series also includes a heating tip.



MB55A-510 / MB55A-300



MB55A-510/MB55A-300



MB54A-510/MB54A-300



MB54-510L/MB54-300L

**Torch and Regulators
 Covered by 3 Year
 Limited Warranty**

NOTE: All outfits clam shell packaged as shown above.

Stock No.	Fuel Gas	Torch Handle	Cutting Attachment	Cutting Tip	Heating Tip	Welding/ Brazing Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories
MB55A-510	Acetylene	CW5A	CC509P	MC12-1	MT603	MW205	30-100-540 CGA 540	30-15-510 CGA 510	lighter, goggles 20 ft. (6m) 3/16" (5mm) twin hose, check valves & operations manual
MB55A-300								30-15-300 CGA 300	
MB54A-510								30-15-510 CGA 510	
MB54A-300								30-15-300 CGA 300	
MB54-300L								30-15-510 CGA 510	check valves & goggles
MB54-510L									

NOTE: Capacity with tips supplied in Acetylene outfits: cuts up to 5/8" (16mm), welds up to 1/8" (3mm). Medium Duty Series 30™ Regulators covered by 3 Year Limited Warranty.



Heavy & Medium Duty

Outfits



16206 HEAVY DUTY

COMBINATION TORCH/TIP KITS

OXYGEN-ACETYLENE

HEAVY DUTY KIT SC TORCH CUTS TO 8" (203mm)

MEDIUM DUTY KIT MC TORCH CUTS TO 6" (153mm)

(With optional tips)

These premium, versatile kits come with tips to do most any job. They include our classic SC & MC Cutting Assemblies which are backed by our "LIFETIME" WARRANTY. Also included are a heating tip, welding tip and 3-cutting tips. The Heavy Duty kit is capable of cutting from 3/8" to 2" and Medium Duty capable of cutting from 1/4" to 1" with tips included. Our thick-wall welding and heating tips hold up well to excess heat and are capable of providing years of service. The Graf-Tite® Cutting Tip seats hold up far longer than traditional metal to metal seats requiring less replacement. Torches may be used with alternate fuel gases and tips designated for alternate fuel.



16205 MEDIUM DUTY

Stock No.	Fuel Gas	Torch Handle	Cutting Attachment	Cutting Tips	Welding Tip	Heating Tip
16205	Acetylene	WH100	MC509	MC12-0 MC12-1 MC12-2	MW203	MT603 (40,000 BTUs)
16206		WH200	SC209	SC12-1 SC12-2 SC12-3	SW203	ST602 (40,000 BTUs)

NOTE: Torches **do not** have built in flash arrestors. Kits include Safety and Operations manual.



Safety • Performance • Durability





Dual Guard™ Outfits are designed with a Flashback Arrestor built into the Torch Head



Heavy Duty Combination Outfits

Stock No.	Description	Torch Handle	Cutting Attachment	Welding Tip	Cutting Tip	Heating Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories Included
HD-H510A	Display Box Acet.	WH200	DG209	SW205	SC12-1&2	ST602	40-175-540	40-15-510	Yes
HD-H300A	Display Box Acet.	WH200	DG209	SW205	SC12-1&2	ST602	40-175-540	40-15-300	Yes
HD-H510	Display Box Acet.	WH200	DG209	SW205	SC12-1&2	ST602	40-175-540	40-15-510	No
HD-H300	Display Box Acet.	WH200	DG209	SW205	SC12-1&2	ST602	40-175-540	40-15-300	No
HD-M510	Display Box Acet.	WH200	DG209	SW205	SC12-1&2	ST602	30-100-540	30-15-510	No
HD-510T	Toolbox Acet.	WH200	DG209	SW205	SC12-1&2	ST602	30-100-540	30-15-510	Yes
HD-300T	Toolbox Acet.	WH200	DG209	SW205	SC12-1&2	ST602	30-100-540	30-15-300	Yes
HD-510MPT	Toolbox Propylene	WH200	DG209		SC60-1	ST815	30-100-540	30-50-510	Yes
HD-510LPT	Toolbox Propane	WH200	DG209		SC40-1	ST615	30-100-540	30-50-510	Yes

NOTE: Accessories include: Hose, Goggles, Striker

Medium Duty Combination Outfits

Stock No.	Description	Torch Handle	Cutting Attachment	Welding Tip	Cutting Tip	Heating Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories Included
MD-510A	Display Box Acet.	WH100	DG109A	MW205	MC12-0&1	MT603	30-100-540	30-15-510	Yes
MD-300A	Display Box Acet.	WH100	DG109A	MW205	MC12-0&1	MT603	30-100-540	30-15-510	Yes
MD-510T	Toolbox Acet.	WH100	DG109A	MW205	MC12-0&1	MT603	30-100-540	30-15-510	Yes
MD-300T	Toolbox Acet.	WH100	DG109A	MW205	MC12-0&1	MT603	30-100-540	30-15-510	Yes
MD-510LPT	Toolbox Propane	WH100	DG109A		MC40-1	MT615	30-100-540	30-15-510	Yes
MD-510	Display Box Acet.	WH100	DG109A	MW205	MC12-0&1	MT603	30-100-540	30-15-510	No

NOTE: Accessories include: Hose, Goggles, Striker

Heavy Duty Straight Torch Outfits

Stock No.	Description	Torch	Cutting Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories Included
HT2-MD510T	Display Box Acet.	DG229	SC12-1&2	30-100-540	30-15-510	Yes
HT2-MD300T	Display Box Acet.	DG229	SC12-1&2	30-100-540	30-15-300	Yes
HT-MD510T	Display Box Acet.	DG929B	SC12-1&2	30-100-540	30-15-300	Yes
HT-H510	Plain Box Acet.	DG929B	SC12-1	40-175-540	40-15-510	No

NOTE: Accessories include: Hose, Goggles, Striker

Heavy Duty Combination Outfit



Conforms to
ANSI/UL
Std. 123



Intertek



**Medium Duty
Combination Outfit**



**Medium Duty
Combination Toolbox Outfit**



**Heavy Duty Straight Torch
Toolbox Outfit**



**Heavy Duty Combination
Toolbox Outfit**



Versa-Torch™ Refrigeration & Air Conditioning Outfit

Outfits



ACETYLENE TAG-A-LONG™ KIT

Portable, lightweight Smith Tag-A-Long Cutting and Welding Outfits are ready to go where you need them. Compact design stores easily for road travel or when not in use. Smith Series 30 Regulators provide efficient and dependable control of gases. Torch and regulators covered by a 3 year limited warranty. High density polyethylene carrier is extremely durable and includes a hose wrap and covered accessories storage compartment. All kits include reverse flow check valves for added safety. Complete operation and instruction manual also included.

TL-550



THE VERSA-TORCH™ SYSTEM DOES IT ALL!

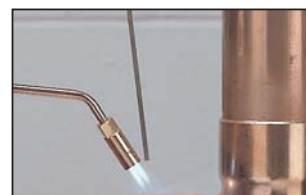
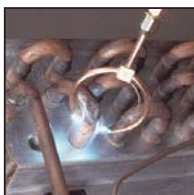
This is one of the most versatile systems on the market. The Versa-Torch Outfit features a lightweight nickel plated torch handle and cutting attachment backed by Smith's exclusive "LIFETIME" WARRANTY and Service Agreement. A broad selection of cutting, welding and specialty attachments makes the Versa-Torch System ideal for manufacturing, maintenance and repair, air conditioning, refrigeration, plumbing, metal fabrication, jewelry, metal sculpture and many other applications. High density polyethylene carrier is rugged and lightweight. Outfit includes complete operation and instruction manual (see pages 11 & 12 for accessories.) Outfit includes reverse flow check valves for added safety.

NOTE: Compatible with all Versa-Torch™ and Quickbraze® tips as shown on pages 13 & 14.

VT-4T

Includes:

2329E - 10 cubic foot acetylene cylinder
OC20 - 20 cubic foot oxygen cylinder
13493 - Plastic Caddy Carrier



Stock No.	Fuel Gas	Torch Handle	Cutting Attachment	Cutting Tips	Welding/Brazing Tip	Oxygen Regulator	Fuel Gas Regulator	Accessories
VT-4T	Acetylene	AW1A	AC309	MC12-00	LT103 LT104 LT106	30-100-540 CGA 540	30-15-200 CGA 200	lighter, goggles, 12.5 ft. (3.8m) 3/16" (5mm) twin hose, regulator mount, check valves & operations manual, tip tube & heating tip
TL-500 (No tanks)		CW5A	CC509P	MC12-0	MW205			lighter, goggles, 12.5 ft. (3.8m) 3/16" (5mm) twin hose, regulator mount, check valves & operations manual
TL-550								lighter, goggles, 12.5 ft. (3.8m) 3/16" (5mm) twin hose, "R" 20 cu. ft. oxy. cylinder, "MC" 10 cu. ft. acetylene cylinder, check valves & operations manual

NOTE: Capacity with tips supplied in outfit: cuts up to 3/8" (10mm), welds up to 1/8" (3mm).

Safety • Performance • Durability

Oxy-Fuel Outfits - Refrigeration/Air Conditioning



23-5005A
(Adapts to A or B Style
Regulator Connections)

S6
Single Flame Tip

T7
Twin Flame Tip

C2
"C" Style Tip

14711
Heating Tip



Caddy Kit - 23-5004A
Tips Supplied Braze To 1-1/8" (29mm)

Quickbraz® Tip Data Chart

Stock Number	Gas Pressures PSIG Settings		Consumption Rate (CFH)		BTU Output/Hr	Brazing Capacity Copper Pipe	No. Flames
	Oxygen	Fuel	Oxygen	Fuel			
S4	8	8	0.8	0.6	1,120	1/4" - 3/8"	1
S6	8	8	3.2	3.4	7,360	1/2" - 3/4"	1
T7	8	8	9.8	7.6	12,200	5/8" - 1-3/8"	2
C2*	7	5	6.4	7.2	12,350	1/2" - 1-1/8"	5
C6*	10	8	9.6	10.8	19,720	7/8" - 1-5/8"	7
14711*	12	10	14.7	9.7	13,760	1/2" - 1-5/8"	4
A3	8	8	8.4	7.2	6,600	3/4" - 1-3/8"	1
LP2*	25	10	26	6	14,500	7/8" - 1-5/8"	1

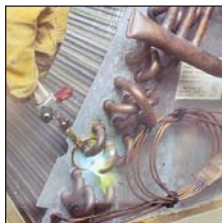
*For use with Oxy-Acetylene only.

Kit Stock Number	Torch Assembly	Single Flame Tip	Twin Flame Tip	"C" Style Tip	Multi-Flame	Regulators	Accessories
23-5004A*	11-1114 "B" - 9/16" Hose Fittings	S6	T7	C2	14711	30-20-540, 30-15-200	Cylinder Caddy Carrier, Striker, Check Valves & Operations Manual
23-5005A**	11-1116 "A" - 3/8" Hose Fittings						"A" to "B" Hose Adaptors & Operations Manual (Hose may be attached to "A" or "B" Regulator Fittings)

NOTE: All outfits include complete instruction and operation manual. Outfits with regulators, include reverse flow safety check valves.



Brazes solenoid and expansion valves so quickly that heat is unable to transfer to internal parts, protecting them from damage and eliminating the need for messy and costly heat sink materials.



Twin flame tips solder coil return bends quickly and evenly; concentrated heat will not heat and loosen surrounding joints.



Twin flame or patented "C" Style tips quickly braze reversing valves without burning internal components.



Revolutionary patented "C" style tips provide 100% flame wrap for fast, efficient, even heating. Heat produced is confined to the joint area protecting surroundings from burning. "C" style tips also assure even heat on the blind side of the braze joint.



Accumulators can be brazed extremely fast by simply laying the patented "C" style tip near the joint.

Versa-Torch™ Standard Tip Selection Chart

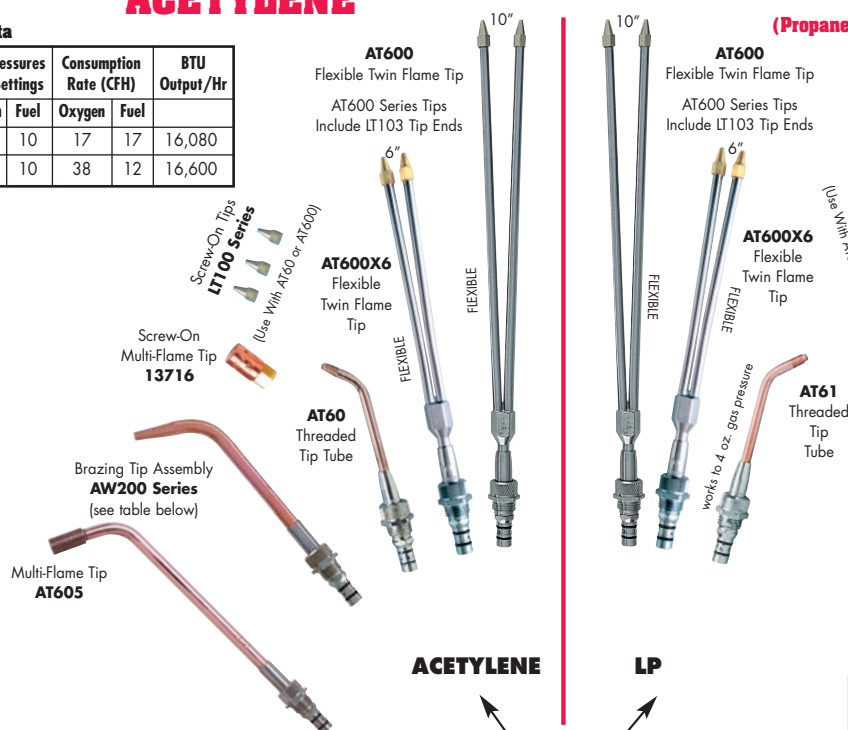
ACETYLENE

LP

(Propane, Natural Gas, Propylene)

Heating Tip Data

Stock Number	Gas Pressures PSIG Settings		Consumption Rate (CFH)		BTU Output/Hr
	Oxygen	Fuel	Oxygen	Fuel	
13716	14	10	17	17	16,080
13715	14	10	38	12	16,600



Tip No.	Drill Size	Flame Opening Dia.		Brazing Capacity Dia. Copper Pipe		Pressure Recommendations Each Gas (PSIG)
		Inches	MM	Inches	MM	
BRAZING TIP ASSEMBLY (Acetylene)						
AW201	71	.026	.7	1/4 to 3/8	6 to 10	10
AW203	67	.032	.8	3/8 to 5/8	10 to 16	
AW205	57	.043	1.1	1/2 to 7/8	12 to 22	
AW207	54	.055	1.4	5/8 to 1-3/8	16 to 35	
AW209	49	.073	1.9	3/4 to 2-1/8	19 to 54	
AW210	44	.086	2.2	7/8 to 2-5/8	22 to 65	
SCREW-ON TIPS (Acetylene)						
LT103	63	.037	.9	1/2 to 3/4	12 to 19	5-10
LT104	56	.047	1.2	5/8 to 1	16 to 25	
LT106	52	.064	1.6	3/4 to 1-1/2	19 to 38	
SCREW-ON TIPS, LP (Propane)						
NE153	44	.086	2.2	5/8 to 1	16 to 25	5-10
NE154	36	.106	2.7	7/8 to 1-5/8	22 to 41	



Kevlar® Hose Features & Benefits

Extremely durable, heat resistant, light weight and flexible. Excellent for repetitious brazing operations. (Not recommended for use with cutting attachments.)

NOTE: For AW1A Handle only.



Kevlar® Brazing Hose

14779-4-10

"A" & "B" Fitting Twin Hose



Versa-Torch™ / Quickbraz® Tip Selection Chart

LP
(Propane, Natural Gas, Propylene)



Screw-On Tip
Available For LP Gas Only
LP2

Tip Comes With
A3 Tip Ends
For Acetylene
or LP Gas



Single Flame Tip
S4, S6



Kevlar® Brazing Hose



14779-4-10

"A" & "B" Fitting Twin Hose

Kevlar® Hose Features & Benefits

Extremely durable, heat resistant, light weight and flexible. Excellent for repetitious brazing operations. (Not recommended for use with cutting attachment.)

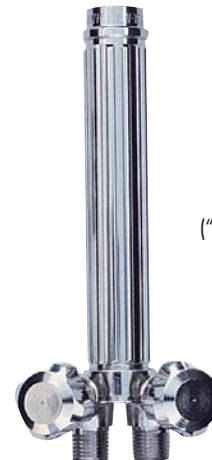


LP
Adaptor
AT41
(injector)
(works to 4 oz.
gas pressure)



AW1A
Versa-Torch
Handle
("A" hose fittings)

OR



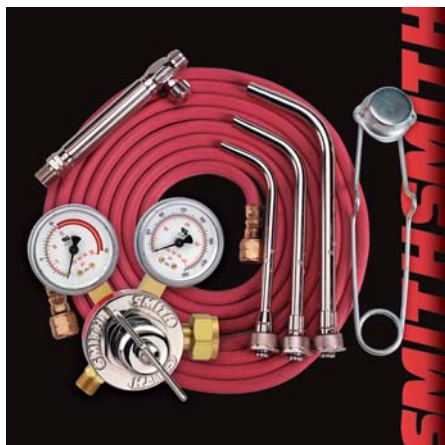
AW10A
Versa-Torch
Handle
("B" hose fittings)

Quickbraz® Tips (See Tip Technical Data On Pg. 12)

Tip No.	Orifice Diameter	Drill Size	Brazing Capacity In.	Brazing Cap. mm	No. Flames	Recommended Fuel Gases & Oxy.	Application Recommendations
SINGLE FLAME TIPS							
S4	.025	71	1/4" - 3/8"	6 - 9.5	1	Any Gas	<ul style="list-style-type: none">Leak RepairCapillary TubesEvaporator CoilsInstalling Small ValvesAppliance Repair
S6	.037	63	1/2" - 3/4"	12 - 19			
TWIN FLAME TIPS (Flexible)							
T7	.041	59	5/8" - 1-3/8"	16 - 35	2	Any Gas	<ul style="list-style-type: none">Compressor LinesReversing ValvesReturn BendsTight Clearance BrazingAppliance Repair
SCREW-ON TIP ENDS FOR AT400 FLEXIBLE TWIN TIP ASSEMBLY							
A3	.037	63	3/4" - 1-3/8"	19 - 35	1	Acetylene / LP	<ul style="list-style-type: none">Manufacturing BrazingManufacturing BrazingLarge Diameter Pipe BrazingGeneral Purpose Brazing
LP2	.076	48	7/8" - 1-5/8"	22 - 41	1	Natural Gas / LP	

Acetylene-Air Outfits - Soldering, Brazing, Sweating & Heating

Outfits



NE835A

ACETYLENE-AIR HANDI-HEET® OUTFIT

Handi-Heat® soldering outfits provide fast heat with acetylene and atmospheric air. Concentrated soft flame delivers 1700° F heat just where it is needed for maximum performance on all types of soldering, heating, thawing and other applications. No oxygen tank required.

Tough NE180A torch handle is built to last – machined from solid brass. Unlike plastic torches, it is not sensitive to temperature changes. Full length fluted handle provides firm comfortable grip. Needle valve provides excellent flame adjustment. Easy to operate, just hold torch and set flame with one hand.

Handi-Heat soldering tips have Smith's famous Slip-in design. Seats perfectly by hand . . . no wrench needed! "O" ring provides tight gas seal and allows operator to rotate tip to any position. All tips and torch body are nickel plated. Sturdy single stage regulator provides steady and sensitive gas regulation for maximum torch performance.

Outfit No.	Torch Handle	Tips	Regulator	Fits Tanks	Accessories
NE835A	NE180A	NE180-1 NE180-2 NE180-3	30-15-520 CGA 520	"B" 40 cu. ft	RL121 12-1/2' (3.8m) Hose N113A Lighter

NOTE: Torch does not require check valves or flashback arrestors.

Air/Acetylene Torch & Tips



NE180A
Length 5 3/8"
(130mm)
Weight 8 1/4 oz.

NE180A TORCH HANDLE

1 Year Warranty

Use with acetylene gas. Machined from solid brass. Hose connection 9/16"-18 LH thread, "B". Fits R12 or R14D hose connections.

Burns acetylene with atmospheric air. Ideal for sweating copper joints up to 6" (152mm) in diameter, soldering, leading, thawing, heating and straightening.

- No oxygen tank needed
- Clean, economical heat
- No wrench needed - tips are hand tightened
- One-hand flame adjustment
- 360° Tip turning radius
- Tough all brass body
- Smooth turning needle valve
- Rugged tips
- Nickel plated for added heat resistance
- Fuel pressure setting: 12 -14 PSIG

Air / Acetylene Tips



NE180-4
Length 8" (203mm) -
Weight 3 1/2 oz.

NE180-4 EXTRA LARGE TIP

Use for fast point burning, heavy soldering and heating. Replacement Orifice No. L704-6.



NE180-3
Length 7 5/8" (194mm) -
Weight 3 1/4 oz.

NE180-3 LARGE TIP

For pipe thawing, light brazing and silver soldering. Replacement Orifice No. L703-6.



NE180-2
Length 6 7/8" (175mm) -
Weight 2 1/2 oz.

NE180-2 MEDIUM TIP

For all types of soft soldering, body leading, etc. Replacement Orifice No. L702-6.



NE180-1
Length 6 1/8" (156mm) -
Weight 1 7/8 oz.

NE180-1 SMALL TIP

For fine instrument work, auto radiators, etc. Replacement Orifice No. L701-6.



NE180-0
Length 4 3/4" (121mm) -
Weight 1 3/4 oz.

NE180-0 FINE TIP

For jewelry, small tube and electronics soldering. Replacement Orifice No. L711-6.



NE180-00
Length 4 3/4" (121mm) -
Weight 1 3/4 oz.

NE180-00 SUPER FINE TIP

For delicate jewelry and electronic soldering. Replacement Orifice No. L710-6.

Tip Number	Flame Opening		Flame Inner Cone Length		Consumption SCFH	BTU Output
	Inch	mm	Inch	mm		
NE180-4	3/8"	10	1-3/4"	45	22.8	32,900
NE180-3	1/4"	6	1-1/2"	38	9.0	13,000
NE180-2	3/16"	5	1-1/4"	32	5.2	7,500
NE180-1	9/64"	3.6	3/4"	19	2.8	4,000
NE180-0	3/32"	2.4	1/4"	6	1.5	2,200
NE180-00	1/16"	1.7	1/8"	3	.5	720

Safety • Performance • Durability



239-193 AIR/ACETYLENE KIT

See previous page for additional tip sizes.

SILVER SMITH™ Designed for jewelers, silver smiths and hobbyists. (Excellent choice for light brazing and soldering.) Air-fuel torches deliver the ultimate in quality and flame control. The all metal torch provides strength and long life, while precision jeweled orifice tips produce a soft, consistent flame. The Silver Smith™ torch system is designed to work with air and acetylene gas.

FEATURE BENEFITS

- Nickel plated brass handle for strength and long service
- Heavy duty industrial regulators for added safety and service
- Synthetic sapphire orifices provide consistent accurate flame control, and are easily replaced if obstructed.

Outfit No.	Torch Handle	Tip	Regulator	Fits Tanks	Accessories
239-193	NE180A	NE180-00	30-15-520 CGA 520	"B" 40 cu. ft.	RL121 12.5' (3.8m) Hose N113A Lighter

Jewelry Repair & Manufacture, Hobby & Crafts, Metal Sculpture, Glass Blowing, Plumbing, Electronics & Repair



23-1001D

23-1001D

Works with any fuel gas and oxygen. Includes 11-1101C torch, #3-7 curved tips, 8' (2.4m) hoses and instruction manual. Packaged in display box as shown ("B" hose connections fuel 9/16"-18-LH, Oxygen 9/16"-18-RH).

239-047B with **BRITISH** hose connections (Fuel 3/8"-19 BSPF-LH, Oxygen 3/8"-19 BSPF-RH). Tips included #3-7.

239-048A with **EUROPEAN** hose connections (Fuel 3/8"-19 BSPF-RH, Oxygen 1/4"-19 BSPF-RH). Tips included #3-7.

23-1013A with **AUSTRALIAN** hose connections (Fuel 5/8"-18-LH, Oxygen 5/8"-18-RH). Tips included #3-7.

Outfit For Disposable Tanks 23-1014

Includes 249-499 preset oxygen regulator, 249-500 preset propane regulator, cylinder holder, 11-1101C torch, #5 tip, 8 ft. (2.4m) hoses and instruction manual. Allows maximum portability and may be used in locations where larger pressurized cylinders are not allowed.

Kit shown in inset photo above may be used with disposable MAPP® or propane and oxygen cylinders (Cylinders not included). **NOTE:** Disposable oxygen and fuel tanks may be purchased at most hardware locations. May not be used with LP Multi-Flame (Rosebud) tip.

23-1003B Includes 11-1101C torch, #3-7 tips, 30-15-520 acetylene regulator (for "B" 40 cubic foot tank), 30-20-540 oxygen regulator, reverse flow check valves, 8' (2.4m) covered hoses and instruction manual.

23-1003P Kit with regulator fitting for propane or larger industrial acetylene cylinders over 40 cubic feet. Includes 11-1101C torch, #3-7 tips, 30-15-510 fuel regulator, 30-20-540 oxygen regulator, reverse flow check valves, 8' (2.4m) covered hoses and instruction manual.

23-1003 Kit with regulator fitted for acetylene (for "MC" tank) 10 cu. ft. cylinder. Includes 11-1101C torch, #3-7 tips, 30-15-200 fuel regulator, 30-20-540 oxygen regulator, check valves, 8' (2.4m) covered hoses and instruction manual.

Conforms to
ANSI/UL
Std. 123



Hoses may be connected to any standard oxy-fuel regulators. (no adaptors required)



The Little Torch[™] has unmatched flexibility - it can be used with several fuels including acetylene, hydrogen, propane, propylene, MAPP[®], or natural gas. It produces a perfectly controlled, completely stable flame hot enough to melt commercially weldable metals, glass and even ceramics. It may also be used with special heating tips to melt up to 3 oz. of gold or silver. Excellent for soldering platinum.

It's the complete works in a handy self-contained lightweight unit. These highly portable kits come complete with everything you need for your soldering or brazing operations. Kits include tanks, regulators, safety check valves, five tips, torch and hoses all in a handy carrying case. Oxygen and acetylene cylinders can be refilled at most welding supply stores (disposable LP tanks are not included). Kits weigh less than 32 lbs.



23-1015P
Propane Caddy

23-1015P Propane Caddy Includes 13558 (5 lb.) refillable propane tank, OC20 (20 cu. ft.) oxygen tank, 11-1101C torch with 8 ft. (2.4m) covered hoses, #3-7 tips, 30-20-540 oxygen regulator, 30-15-510 propane regulator, H698 pair reverse flow check valves, 13787A powder coated metal carrier and complete operation and instruction manual.



23-1010P
Propane Caddy

23-1010P Propane Caddy Includes 11-1101C torch, 8' (2.4m) covered hoses, #3-7 tips, 249-500 preset propane regulator, 30-20-540 oxygen regulator, OC20 oxygen cylinder (20 cu. ft.), 13493 caddy carrier, H698 pair check valves, and complete instruction manual. The 14.1 oz. disposable LP tank provides up to 15 hours of running time with a #5 tip. Also works with 16 oz. disposable MAPP[®] tank.

Disposable tank not included



23-1004A
Acetylene Caddy

23-1004A Acetylene Caddy Includes 11-1101C torch, #3-7 tips, 30-15-200 acetylene regulator, 30-20-540 oxygen regulator, H698 pair reverse flow check valves, 8' (2.4m) covered hoses, OC20 (20 cu. ft.) oxygen cylinder, 2329E (10 cu. ft.) acetylene cylinder, 13493 caddy carrier and instruction manual.

14014 MAGNETIC TORCH STAND & TIP ORGANIZER

Solid metal stand comes with holes drilled and numbered for #2-7 tips. Just a twist of the wrist removes the torch from the magnet. Magnetic clip mounts easily on Little Torch body (torch and tips sold separately).



**Torch
Stand**

CYLINDERS ONLY

Stock No.	Gas	Capacity	Height-Diameter
OC20	Oxygen	20 cu. ft.	17 3/4" - 5 1/4"
2329E	"MC" Acetylene	10 cu. ft.	14 1/2" - 4 1/8"
13558	Propane	5 lb.	12 1/2" - 8"

LITTLE TORCH REPLACEMENT HOSES

(Connection Tool Included)

Hose Type	Fuel	Length/ Inside Dia.	Fittings*	Stock No.
Little Torch	Any Fuel	8' - 1/8"	B	13254-3-8
Little Torch	Oxygen	8' - 1/8"	B	13254-1-8
Little Torch	Oxygen/Fuel - Twin Hose	8' - 1/8"	B	13254-4-8

* "B" fittings 9/16" - 18

Safety • Performance • Durability

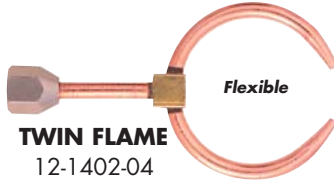
Tips & Technical Information



CURVED
12-1401-07



STRAIGHT
129-124-04



TWIN FLAME
12-1402-04

Flexible

Sapphire Tips

Due to the extraordinarily small orifice diameter of tips sizes #2-3, tips are fitted with a laser drilled synthetic sapphire to assure accurate gas flow and consistent flame characteristics.

ALL TIPS ARE 100% FLAME TESTED



Flexible Tip Extension
For Customizing Angle And Distance From Handle

Stock No.
2327-3SP
Length
3" (76mm)

Size	CURVED Stock No.	STRAIGHT Stock No.	Use With Oxygen and:	Orifice Dia.	Drill Size	Gas Pressures (PSI)		Gas Consumption (CFH)		BTU/hr	Brazing Capacity Copper Pipe
						Oxygen	Fuel	Fuel	Oxygen		
#2	12-1401-02	N/A	Acetylene, Hydrogen only	.006	97	2	2	.09	.11	130	N/A
#3	12-1401-03	N/A	Any Fuel Gas	.011	85	4	4	.78	.94	1,150	Up to 1/8"
#4	12-1401-04	129-124-04		.020	76	5	5	1.57	1.88	2,300	1/4" - 3/8"
#5	12-1401-05	N/A		.029	69	6	6	2.58	3.1	3,800	5/16" - 5/8"
#6	12-1401-06	N/A		.037	63	6	6	4.48	5.38	6,585	3/8" - 3/4"
#7	12-1401-07	N/A		.047	56	8	8	6.27	7.52	9,200	1/2" - 7/8"

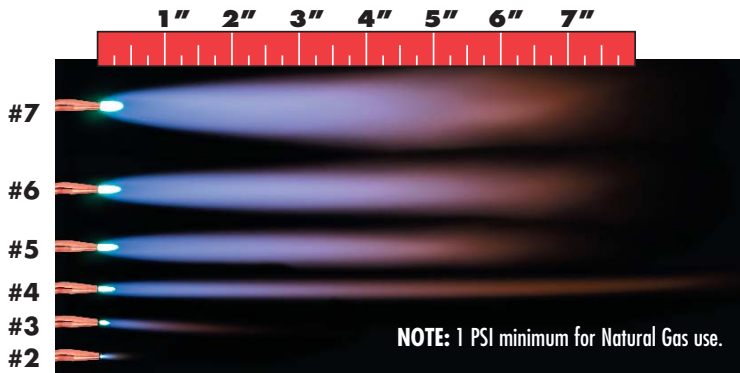
Size	TWIN FLAME Stock No.	Use With Oxygen and:	Orifice Dia.	Drill Size	Gas Pressures (PSI)		Gas Consumption (CFH)		BTU/hr	Brazing Capacity Copper Pipe
					Oxygen	Fuel	Fuel	Oxygen		
#4	12-1402-04	Any Fuel Gas	.020	76	5	5	2.91	3.49	4,300	1/4" - 5/8"
#5	12-1402-05		.029	69	6	6	4.70	5.64	6,900	5/16" - 3/4"
#6	12-1402-06		.037	63	6	6	6.50	7.80	9,550	3/8" - 7/8"

NOTE: All values determined using acetylene gas.



TWIN FLAME

APPROX. FLAME SIZES AT NEUTRAL MIXTURE (OXYGEN/ACETYLENE)



NOTE: 1 PSI minimum for Natural Gas use.



HEATING TIP (Rosebud)

Heating Tips

Stock No.	Fuel	Gas Pressures (PSI)		Length	Gas Consumption (CFH)		Rosebud Flame BTU/hr
		Oxygen	Fuel Gas		Fuel	Oxygen	
13-662	Acetylene, Hydrogen Propylene, MAPP® 8,000 BTU Output	14	10	6" (153mm)	4.58	5.51	7,050
13717	Propane 5,000 BTU	14	10	6" (153mm)	5.12	12.80	12,800
	Natural Gas 2,400 BTU	7	5				

Tip Ends Actual Size



Acetylene

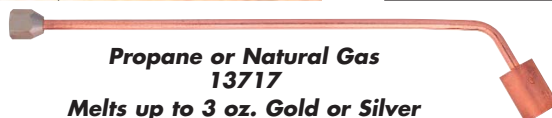


Propane



Acetylene 13-662

Melts up to 3 oz. Gold or Silver



Propane or Natural Gas 13717

Melts up to 3 oz. Gold or Silver

Smith torch handles are available in three capacities to match job requirements — Heavy, Medium, and Standard Duty. Torches have silver brazed joints to provide overall strength and rigidity for safe performance under rugged conditions. Torch handles are individually tested to maintain the Smith reputation for quality and dependable performance. And all standard Smith torches are covered by our exclusive "LIFETIME" WARRANTY & Service Agreement.

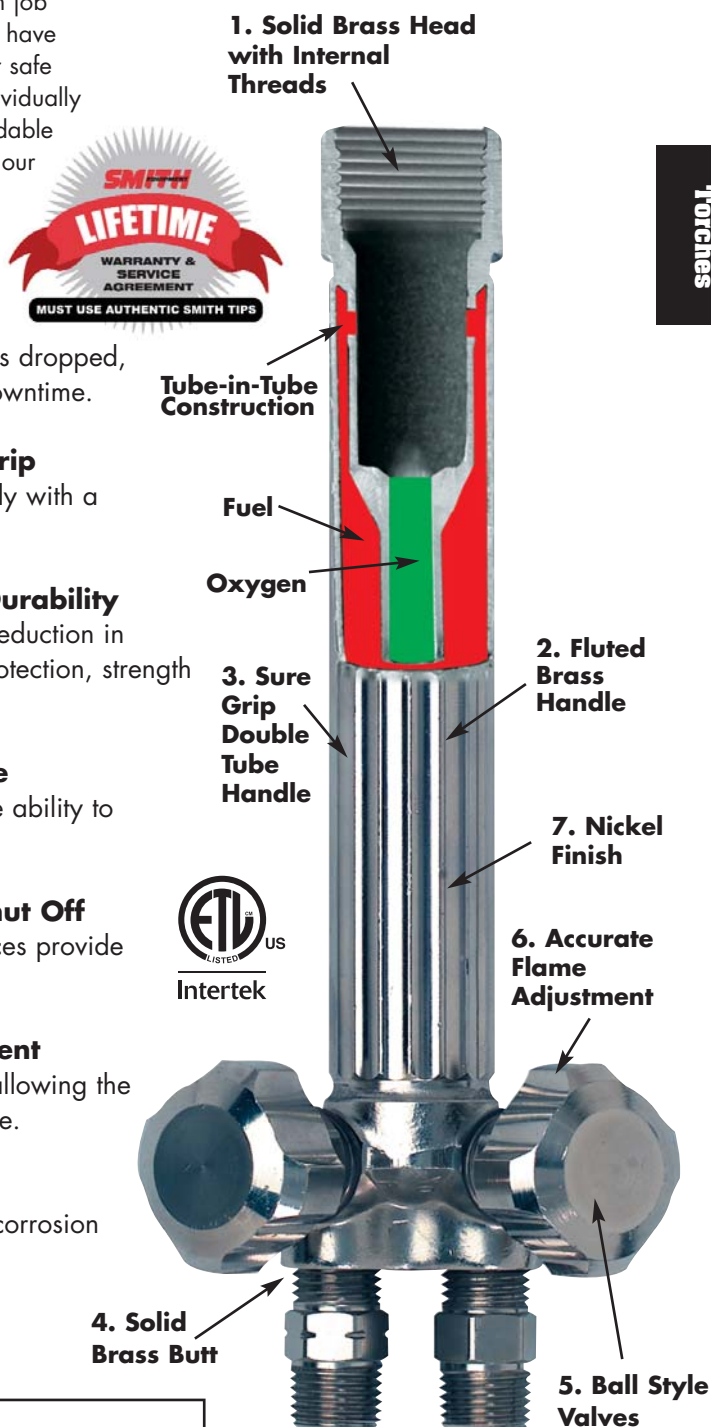
FEATURE BENEFITS

- 1 Internal Threads Are Protected**
Threads are protected from damage if the torch is dropped, eliminating costly torch repair, replacement or downtime.
- 2 Fluted Brass Handle for a Firm Steady Grip**
The ribbed barrel fits the gloved hand comfortably with a positive feeling of control.
- 3 Double Tube Handle Results in Greater Durability**
Tube within a tube is designed for strength and reduction in weight. Internal tube is silver brazed for extra protection, strength and leak resistance.
- 4 Forged Brass Butt Gives Long Service Life**
Butt is machined from dense brass forging for the ability to withstand rugged use.
- 5 Stainless Steel Ball Valves for Positive Shut Off**
Corrosion resistant balls and brass seating surfaces provide gall resistance and positive, chatter free seating.
- 6 Teflon® Packing Permits Smooth Adjustment**
Special packing provides a gas-tight seal while allowing the "drag" to be adjusted to the individual preference.
- 7 Nickel Finish Adds Service Life**
The professional appearance is heat, wear and corrosion resistant.

100% TESTED AND INSPECTED

Fuel Gas Chart

Generic Name	Trade Name
Acetylene	—
Propane, Propane-Based Mixtures	Propane-butane, Flamex, Acetogen, Chem-O-Lene, FL. Industrial Gas, Hy-Temp, Fuel Gas, I.G. Gas, Chem-Gas, Lingas, Chemtane
Propylene	HPG, Apachi, B-Plus, Gulf HP Gas, HEF, B.T.U., Liquifuel
Natural Gas (Methane)	Natural Gas, City Gas



NOTE: WH200 supercedes SW1, SW1A & SW1B torch handles.
WH100 Series supercedes MW5 & MW5A torch handles.

HEAVY DUTY HANDLE **WH200** (Supercedes SW1B Handle)

Heavy duty handle allows high gas flow for large cutting tips and heating tips. Heavy duty handles have replaceable hose connections. All handles are covered by Smith's "LIFETIME" WARRANTY and Service Agreement (excluding CW5A Toughcut handle). Inlet connections, 9/16"-18, fits "B" hose connections.

USED WITH: *Cutting Attachments* - SC209, SC200, SC205, SC509 & DG205, DG209, DG200. *Welding Tips* - SW200 & 400 Series. *Heating Tips* - ST600 & ST800 Series.



WH200

Length 7-1/2" (191mm)
Weight 17-3/8 oz. (.46kg)
Handle Diameter 1" (25.4mm)

WH200
Valve Assembly Replacement
G729-5A
(also for SW1A & SW1B)



MEDIUM DUTY HANDLE **WH100** (Supercedes MW5A Handle)

Easy handling, high quality mid-size torch handle. Handles all but the highest volume heating and heaviest welding needs. Features rugged silver brazed construction, forged brass butt and precision machined brass head. Ball type needle valves reduce uneven valve wear and provide easy flame adjustment. Inlet connections, 9/16"-18 right, left hand, fit "B" size hose nuts. Cuts up to 6" (153mm), welds up to 7/8" (22mm). Covered by the "LIFETIME" WARRANTY & Service Agreement.

USED WITH: *Cutting Attachments* - MC505, MC509 & DG109A. *Welding Tips* - MW200 & MW400 Series. *Heating Tips* - MT600 & MT800 Series.



WH100

Length 7" (178mm)
Weight 14 oz. (.39kg)
Handle Diameter 15/16" (24mm)

CW5A (Toughcut™ Handle)

Length 7" (178mm)
Weight 14 oz. (.39kg)
Handle Diameter 15/16" (24mm)

(CW5A 3 YR. WARRANTY)

WH100 & CW5A Valve Assembly
Replacement LW17 (also for MW5 & MW5A)

STANDARD DUTY TORCH HANDLE **AW10A**

"LIFETIME" torch handles designed for general purpose cutting, welding, brazing and heating. Feature rugged silver brazed construction and forged brass butts. Stainless steel ball type valves provide accurate flame control and positive seating.

USED WITH: *Cutting Attachment* - AC309. *Welding Tips* - AW200 Series, AW400 Series. *Heating Tips* - AT600 Series. *Twin Flame Tips* - AT600, AT600X6.



AW10A

Length 6-3/4" (172mm)
Weight 14 oz. (.39kg)
Handle Diameter 15/16" (24mm)

AW10A Valve Assembly Replacement LW17

STANDARD DUTY TORCH HANDLE **AW1A Airline™**

Specially designed to handle standard duty welding, brazing, cutting and fabricating. Lightweight and compact size provide easy handling, even in confined areas. Needle valves located at front end for easy one-hand flame adjustment. Inlet connections 3/8"-24 right and left hand, fit "A" size hose nuts. Cuts up to 3" (76mm), welds up to 1/2" (13mm). Covered by the "LIFETIME" WARRANTY & Service Agreement.

USED WITH: *Cutting Attachment* - AC309. *Welding Tips* - AW200 Series, AW400 Series. *Heating Tips* - AT600 Series. *Twin Flame Tips* - AT600, AT600X6.



Airline™



AW1A

Length 5-3/4" (146mm)
Weight 6-1/8 oz. (.17kg)
Handle Diameter 11/16" (17mm)

AW1A Valve Assembly Replacement AW11A



Smith Equipment's Cutting Attachments are covered by our exclusive "LIFETIME" WARRANTY & Service Agreement. Excluding Toughcut. **Genuine Smith tips must be used to qualify for warranty repair.**



FEATURE BENEFITS

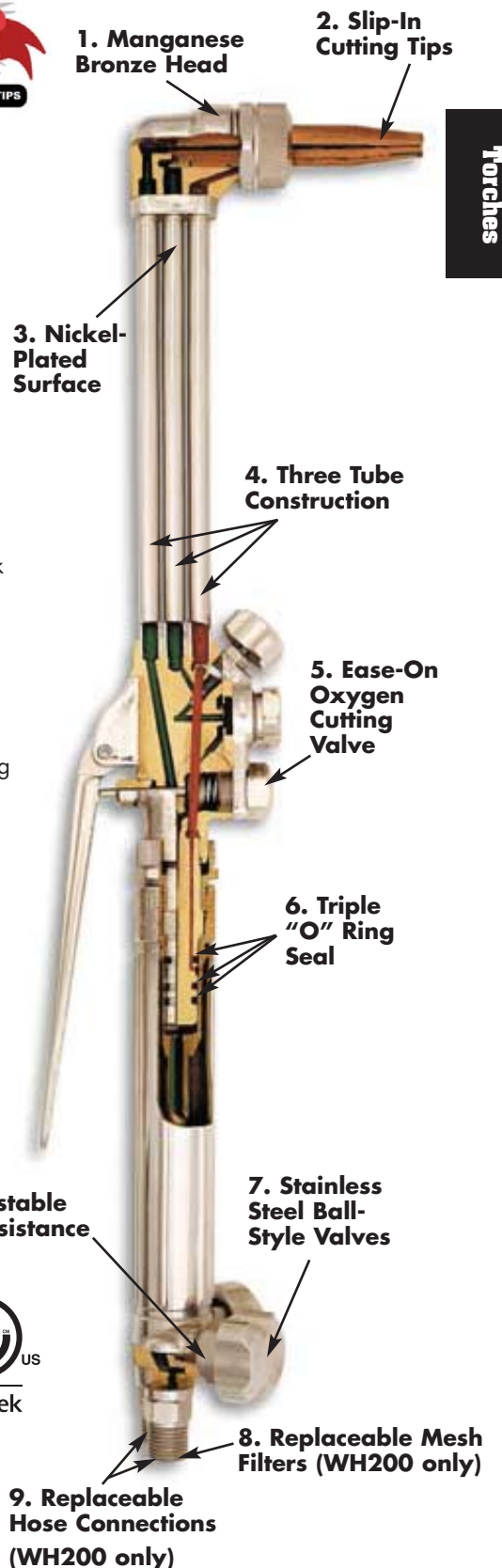
- 1 Manganese Bronze Head**
Super tough thick wall manganese bronze head reduces heat warping and damage. (Medium Duty Head - Brass)
- 2 Slip-In Cutting Tips**
Saves time when changing tips - no wrench needed. Resilient Graf-Tite® seat material protects tip from nicking and maintains positive seating. Requires less replacement than metal-to-metal seat designs.
- 3 Nickel-Plated Surface**
Corrosion-resistant finish, reflects residual heat.
- 4 Three Tube Construction**
Keeps gases separated, eliminating mixing tube burnout. Smith's thick wall, high capacity stainless steel tubes provide high gas flow and superior strength.
- 5 Ease-On Oxygen Cutting Valve**
Allows smooth piercing and key-hole free starts and restarts.
- 6 Triple "O" Ring Seal**
For positive gas seating allowing rotation during operation eliminating hose resistance during cutting.
- 7 Stainless Steel Ball-Style Valves**
For smooth adjustment and positive seating.
- 8 Replaceable Filters (WH200)**
Keep debris from reaching flash arrestor or high pressure seat. (Heavy Duty model)
- 9 Reverse Hose Connections (WH200)**
Replaceable if damaged. (Heavy Duty model)
- 10 Adjustable Valve Resistance**
Set desired valve resistance on all three torch valves.

100% TESTED AND INSPECTED

REPAIR KITS

Use Classification	Attachment	Repair Kit
Heavy Duty	SC & DG 200 Series	SC101
Medium Duty	MC & DG 100 Series	MC101

Repair Kits Include: Cutting Lever Roll Pin, High Pressure Oxygen Valve Assembly, Flo-Trol™ Valve Assembly and O-Rings. See page 69.



10. Adjustable Valve Resistance

7. Stainless Steel Ball-Style Valves



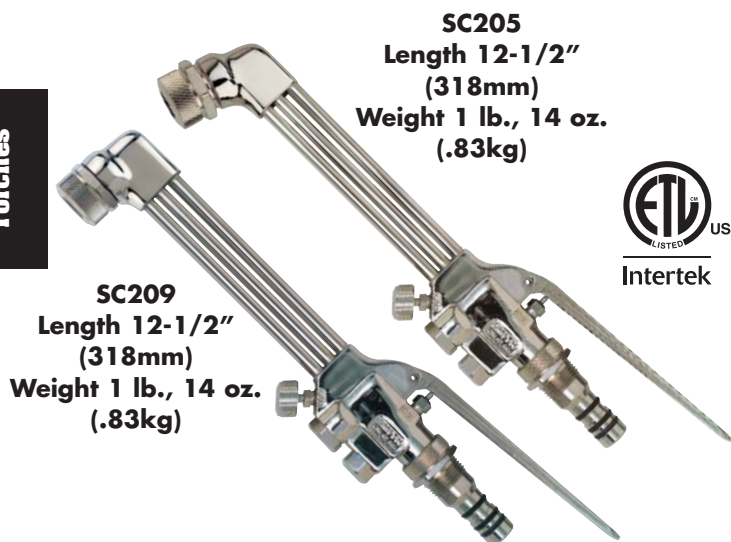
8. Replaceable Mesh Filters (WH200 only)

9. Replaceable Hose Connections (WH200 only)

Heavy Duty/Medium Duty

Heavy Duty Cutting Attachments

Torches



SC205
Length 12-1/2"
(318mm)
Weight 1 lb., 14 oz.
(.83kg)



SC209
Length 12-1/2"
(318mm)
Weight 1 lb., 14 oz.
(.83kg)

SC205 & SC209

Cuts up to 8" (203mm) thick steel. Solid silver brazed construction. Features "O" ring seating and easy-to-change slip-in Graf-Tite® cutting tips with cost saving soft-seats. Covered by the "LIFETIME" WARRANTY & Service Agreement. Use with any industrial equal pressure fuel gases — acetylene, propane, natural gas, propylene, hydrogen, MAPP®, and many others. Several models of standard and special purpose tips are available for use in SC200 Series Cutting Assemblies.

SEE PAGES 32 - 37 FOR CUTTING TIPS

USED WITH: Torch Handles - SW1, SW1A & SW1B & WH200. DG200 Series Valve Assembly Replacement 13936 (also for SC Series)



Medium Duty Cutting Attachment

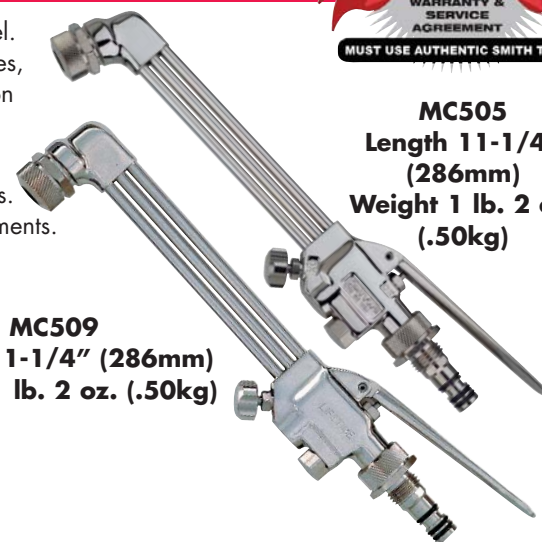
Popular medium duty cutting attachment easily cuts up to 6" (153mm) steel. Solid construction to last a lifetime - silver brazed joints, stainless steel tubes, brass forged butt and head. Has the same quality features and construction as the larger and heavier Smith cutting attachments.

Use with any industrial medium pressure fuel gases - acetylene, propane, butane, natural gas, propylene, HPG®, MAPP®, hydrogen and many others. MC505 & MC509 Covered by "LIFETIME" WARRANTY & Service Agreements.

USED WITH: Torch Handles - MW5, MW5A WH100 & CW5A.

SEE PAGES 38-39 FOR CUTTING TIPS

100% TESTED & MADE IN THE USA



MC505
Length 11-1/4"
(286mm)
Weight 1 lb. 2 oz.
(.50kg)

MC509
Length 11-1/4" (286mm)
Weight 1 lb. 2 oz. (.50kg)



CC509P
3-Year
Limited
Warranty



16229
Adjustable Circle
Cutting Guide
Cutting range from
5/8" - 12" holes



Works with all
cutting assemblies

Stock No.	Style	Head Angle	For Use With Tips:
SC205	Heavy Duty	75°	Oxygen/Acetylene: SC12-00 thru SC12-5, SC56-1 thru SC56-5, Oxygen/Propane, Oxygen/Propane Based: SC40-0 thru SC40-5, SC46-2 thru SC46-5, SC50-1 thru SC50-5, SC2-2, SC2-4, Oxygen/Propylene: SC60-0 thru SC60-5, SC2-2, SC2-4, SC Series Special Purpose Tips except SC110 & 110A, SC112 & SC113
SC209	Heavy Duty	90°	
MC505	Medium Duty	75°	Oxygen/Acetylene: MC12-00 thru MC12-5
MC509		90°	Oxygen/Propane, Oxygen/Propane Based: MC40-0 thru MC40-3
CC509P*			Oxygen/Propylene: MC60-1, MC60-2 MC Series Special Purpose Tips

NOTE: DG200 Series supercedes SC200 and SC500 Series cutting assemblies.

DG109A Series supercedes MC509 Series cutting assemblies.

* Supplied in Toughcut™ Outfits - 3 year warranty



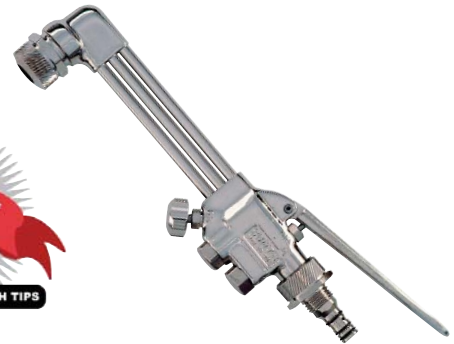
Standard Duty

Airline™ - Standard Duty Cutting Attachments

Small light weight cutting torch with cutting capacity up to 3" thick (76mm) steel. Has same quality construction and features built into each Smith cutting attachment.

Covered by the "LIFETIME" WARRANTY & Service Agreement.

USE IN: Torch Handles - AW1A, AW10A.



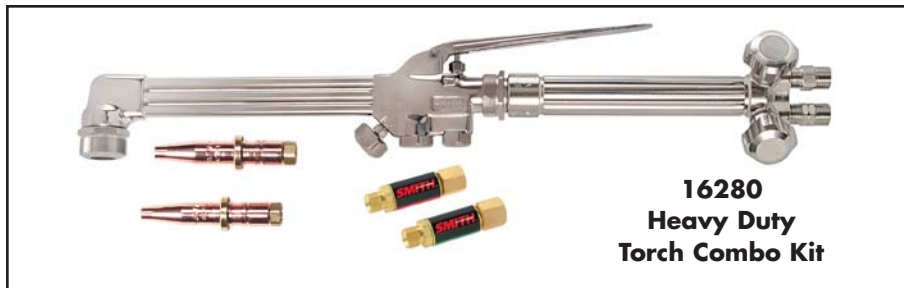
Torches

AC309 Series
Length 8-1/2" (216mm)
Weight 1 lb. (.44kg)

Stock No.	Head Angle	SEE PAGES 38 - 39 FOR CUTTING TIPS
AC309	90°	Oxygen/Acetylene: MC12-00 thru MC12-4 Oxygen/Propane Oxygen/Propane Based: MC40-0 thru MC40-3 Oxygen/Propylene: MC60-1 thru MC60-4 MC Series Special Purpose Tips



Heavy & Medium Duty Combination Torch Kits with two cutting tips



16280
Heavy Duty
Torch Combo Kit

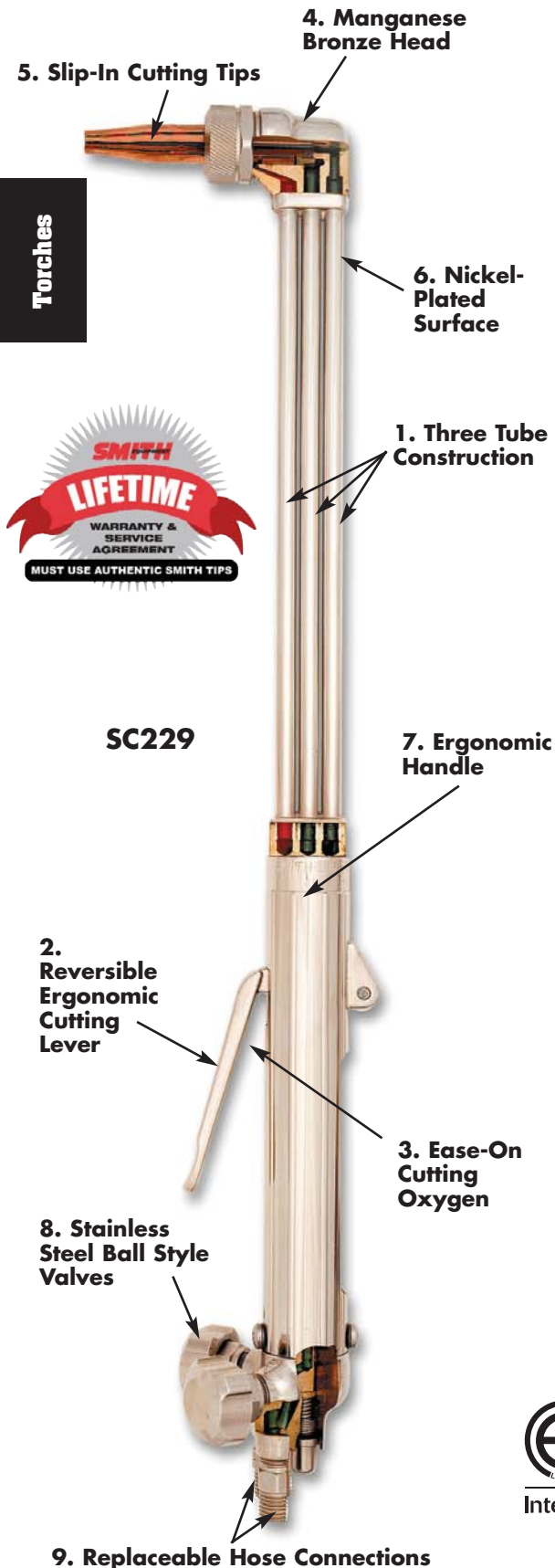


16281
Medium Duty
Torch Combo Kit

- Kit includes torch mount
- Flashback Arrestors
- In-Tip Mix
- Warp resistant manganese bronze head (Heavy Duty Only)
- Internal threads on handle are protected from damage
- Positive shut-off stainless steel ball type valves

Stock No.	Torch Handle	Cutting Attachment	Cutting Tips Included
16281	WH100	MC509	MC12-0 & MC12-1
16280	WH200	SC209	SC12-0 & SC12-1





FEATURE BENEFITS

- 1 Three Tube Construction**
Keeps gases separated, eliminating mixing tube burnout. Smith's thick wall, high capacity stainless steel tubes provide high gas flow and superior strength.
- 2 Reversible - Ergonomic, Cutting Lever**
Top or bottom mount lever for ease of use.
- 3 Ease-On Cutting Oxygen**
Exceptionally smooth application of cutting oxygen reduces key-holing and slag blow-back without sacrificing extremely high cutting capacity.
- 4 Manganese Bronze Head**
Super tough thick wall manganese bronze head reduces heat warping and damage.
- 5 Slip-In Cutting Tips**
Saves time when changing tips - no wrench needed. Resilient Graf-Tite® seat material protects tip from nicking and maintains positive seating. Requires less replacement than metal-to-metal seat tip designs.
- 6 Nickel-Plated Surface**
Corrosion-resistant finish, reflects residual heat.
- 7 Ergonomic Handle**
Thick, durable raised rib handle for comfort and positive grip. Adds comfort and reduces operator fatigue.
- 8 Stainless Steel Ball-Style Valves**
For positive seating.
- 9 Replaceable Hose Connections**
Easily replaced if damaged.

100% TESTED AND INSPECTED



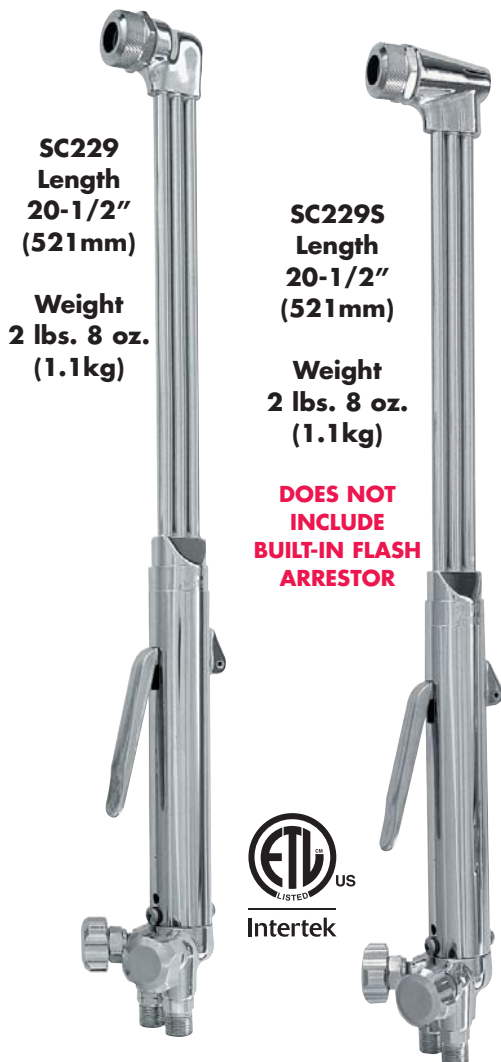
Standard Duty SC Series Cuts Up To 12" (305mm)

Cutting torches feature solid construction and ease of operation for hundreds of jobs in construction, fabricating, shipyards, salvage and other related industries. Silver brazed joints throughout. Head and butt are machined from dense brass forgings. Ball style control valves provide positive gas shut-off. All SC Series torches listed below are covered by Smith's "LIFETIME" WARRANTY.

SC225S & SC229S have larger head without Dual Guard™ module.

- 3 tube "in-tip" mix design keeps gases separated until reaching the tip
- Reversible lever, top or bottom mounting
- Uses long lasting "Soft Seal" Graf-Tite® cutting tips
- Replaceable hose connections and sintered filters
- Wide array of cutting, gouging and specialty tips available
- Versatile - for use with acetylene, propane, propylene, and many other gases
- "Ease-on" cutting jet action reduces tip-clogging and slag blow-back in piercing operation

100% TESTED AND INSPECTED



SC229
Length
20-1/2"
(521mm)

Weight
2 lbs. 8 oz.
(1.1kg)

SC229S
Length
20-1/2"
(521mm)

Weight
2 lbs. 8 oz.
(1.1kg)

**DOES NOT
INCLUDE
BUILT-IN FLASH
ARRESTOR**



Heavy Duty

(Any Fuel Gas & Oxygen)



16229

Adjustable Circle Cutting Guide

Cutting range from 5/8" - 12" holes



Works with all
hand torches

Available Torch Head Angles

SC229S and SC225S feature heavy duty manganese bronze head.

Stock No.	Head Angle	Length inch/metric	See Pages 32 - 37 For Cutting Tips
SC175	75°	17"/432mm	Oxygen/Acetylene: SC12-00 thru SC12-6 SC56-1 thru SC56-5
SC179	90°	17"/432mm	
SC220	180°	21"/533mm	Oxygen/Propane Oxygen/Propane Based: SC40-0 thru SC40-4 SC46-2 thru SC46-6 SC50-0 thru SC50-6
SC225	75°	20-1/2"/521mm	
SC229	90°	20-1/2"/521mm	Oxygen/Propylene: SC60-1 thru SC60-6
SC225S	75°	20-1/2"/521mm	
SC229S	90°	20-1/2"/521mm	
SC365	75°	36"/914mm	
SC369	90°	36"/914mm	
SC360	180°	36"/914mm	

Not equipped with Dual Guard™ module

NOTE: May be used with all Heavy Duty Special Purpose Tips.
See pages 36 - 37

DG & SC Series Hand Torch Valve Assembly Replacement LW14B-1
(excluding SC700 Series Tuf-Tony™)

SC SERIES TORCHES LISTED ABOVE INCLUDE SINTERED METAL INLET FILTERS.

Hand Cutting Torches

SMITH EQUIPMENT®

Extra Heavy Duty (Any Fuel Gas & Oxygen)

Torches

Gas Axe™ Extra Heavy Duty SC929 Cuts Up To 24" (610mm)

Hand cutting torches are built for the toughest jobs. They feature a reversible cutting lever and ease-on oxygen for smooth starts. The torch is also designed with a heavy wall manganese bronze head for durability and resistance to heat warping. Ideal for foundry, scrap and demolition operations.



- 3 tube "in-tip" mix design keeps gases separated until reaching the tip
- Reversible lever, top or bottom mounting
- Exceptional ease-on feature
- Uses long lasting "Soft Seal" Graf-Tite® cutting tips
- Replaceable hose connections
- Wide array of cutting, gouging and specialty tips available
- Versatile - for use with acetylene, propane, propylene, and many other gases
- Superior "ease-on" cutting jet action reduces tip-clogging and slag blow-back in piercing operations

100% TESTED AND INSPECTED



Warning!
High flow Oxygen
Flashback Arrestor
must be used for tip
sizes 6 and up.

Stock No.	Head Angle	Length inch/metric	See Pages 32 - 37 For Cutting Tips
SC929	90°	21"/533mm	Oxygen/Acetylene: SC12-00 thru SC12-6 SC56-1 thru SC56-5 Oxygen/Propane Oxygen/Propane Based: SC40-0 thru SC40-4 SC46-2 thru SC46-6 SC50-0 thru SC50-6 Oxygen/Propylene: SC60-1 thru SC60-2 SC2-2, SC2-4

Extended torch lengths shown on page 29.

Part No. 16219 Extreme ease-on oxygen high pressure seat for metal washing.

NOTE: May be used with all Heavy Duty Special Purpose Tips.
SC Series Hand Torch Valve Assembly Replacement LW14B-1
(excluding SC700 Series Tuf-Tony™)



16229

Adjustable Circle Cutting Guide
Cutting range from 5/8" - 12" holes



Works with all
hand torches

Conforms to
ANSI/UL
Std. 123



Intertek

3176109



1 Year Limited Warranty



Machine Cutting Torches

Smith's heavy duty machine torches provide superior performance. Ease-on cutting lever reduces blow back in piercing and key-holing in re-starts extending tip life and provides high quality cuts. Torch barrels easily adjust to 4 positions at 90°

increments. Barrel diameters are 1-3/8" (9.5mm) to fit most machines. Stainless steel ball type valves provide fine adjustment and positive shut-off. Smith machine torches are covered by our "LIFETIME" WARRANTY, the longest and strongest in the industry.

Two-Hose Models

SC770 Series - Medium Pressure

Industrial duty 2-Hose Machine Torch cuts to 12" (305mm) with medium pressure acetylene, LP or natural gas.

Stock No.	Stock No. (32 Pitch Rack Only)	Overall Torch Length*	SEE PAGES 32 - 36 FOR CUTTING TIPS
SC770	4769-1 Rack	8" (203mm)	Oxygen/Acetylene: SC12 Series, SC56 Series, Oxygen/Propane Oxygen/Natural Gas: SC40 Series, SC46 Series, SC21A Series, SC50 Series Oxygen/Propylene: SC60 Series
	4770 (2) Mounting Screws		
SC772A	15599*	13-3/4" (349mm)	

Rack Pitch 32 - 10 Teeth Per Inch

100% TESTED AND INSPECTED



Three-Hose Model

SC780A Series - Medium Pressure

High capacity 3-hose machine torch cuts up to 24" (610mm) with acetylene and up to 20" (508mm) with medium pressure LP or natural gas.

Stock No.	Stock No. (32 Pitch Rack Only)	Overall Torch Length*	SEE PAGES 32 - 36 FOR CUTTING TIPS
SC781A	SC781-1*	15-1/2" (394mm)	Oxygen/Acetylene: SC12 Series, SC56 Series Oxygen/Propane Oxygen/Natural Gas: SC40 Series, SC46 Series, SC21A Series, SC50 Series Oxygen/Propylene: SC60 Series

Rack Pitch 32 - 10 Teeth Per Inch

NOTE: Overall length is measured from rear of hose connections to front of tip nut.

* Includes mounting screws.



SC770



SC772A

Torches Equipped With:

Standard Barrel Size Rack
Pitch 32, 10 Teeth Per Inch



SC781A



Safety • Performance • Durability



Hand Cutting Torches

SMITH
EQUIPMENT[®]

Gas Axe[™]

1. Slip-In Cutting Tips

2. Manganese Bronze Head

3. Three Tube Construction

4. Tube Supports

SC935

7. Ergonomic Handle

8. Stainless Steel Ball-Style Valves

5. Ergonomic Reversible Cutting Lever

6. Ease-On Cutting Oxygen

9. Replaceable Hose Connections easily replaced if damaged

Gas Axe[™] Extra Heavy Duty Torches Ideal for Scrap/Demolition Cutting

Safety engineered; designed for severe applications. Excellent for use with Propane or Natural Gas. Works with all gases including Propane/Propylene based fuels, Natural Gas & Acetylene. Extra high capacity cuts to 24" (610 mm) with Acetylene. Cuts to 20" (508 mm) with Propane. Backed by a one year warranty.

FEATURE BENEFITS

1

Slip-In Cutting Tips

Saves time when changing tips - no wrench needed. Resilient Graf-Tite[®] seat material protects tip from nicking and maintains positive seating. Requires less replacement than metal-to-metal seat tip designs.

2

Manganese Bronze Head

Super tough thick wall manganese bronze head reduces heat warping and damage.

3

Three Tube Construction

Keeps gases separated, eliminating mixing tube burnout. Smith's thick wall, high capacity stainless steel tubes provide high gas flow and superior strength.

4

Tube Supports

For added strength.

5

Reversible - Ergonomic, Cutting Lever

Top or bottom mount lever for comfort and ease of use.

6

Ease-On Cutting Oxygen

Exceptionally smooth application of cutting oxygen reduces key-holing and slag blow-back without sacrificing extremely high cutting capacity.

7

Ergonomic Handle

Thick brass, durable raised rib handle for comfort and positive grip. Adds comfort and reduces operator fatigue.

8

Stainless Steel Ball-Style Valves

For easy shut-off, smooth adjustment and positive seating.

9

Replaceable Hose Connections

Easily replaced if damaged.

100% TESTED AND INSPECTED

1 Year Limited Warranty

Smith Gas Axe[™] Torches:

- Safety Engineered
- Highest Quality
- Least Repairs
- Less Downtime
- Most Economical To Operate



Warning!
High flow capacity flashback arrestors must be attached to the torch before operating!

Gas Axe™ Extra Heavy Duty



Torches

Recommended Hose Sizes & Recommended Pressures

SC50 Series - Propane/Nat. Gas Tips, Sizes 6-9

Tip Size	Minimum Pressure At Torch	Recommended Pressure Settings (PSIG)				
		1/4" Dia. Hose		3/8" Dia. Hose		
		50 ft.	100 ft.	50 ft.	100 ft.	200 ft.
SC50-6	92 psig	130	145	117	122	138
SC50-7	95 psig	N/R	N/R	125	135	146
SC50-8	95 psig	N/R	N/R	130	140	155
SC50-9	95 psig	N/R	N/R	130	140	164

N/R - Not Recommended - **Note:** Smaller tips require less flow and will operate satisfactory with 1/4" dia. hose.

Lengths Available

21", 3', 4', 5' & 6' lengths.
Contact factory for availability of extended lengths.

Available Torch Head Angles

Heavy duty manganese bronze head. Choice of 75°, 90° and 180°.

SC Series Stock No.	Head Angle	Length inch/metric	See Pages 32 - 37 For Cutting Tips
SC929	90°	21"/533mm	Oxygen/Acetylene: SC12-00 thru SC12-6 SC56-1 thru SC56-9
SC935	75°	3'/914mm	
SC939	90°	3'/914mm	
SC930	180°	3'/914mm	Oxygen/Propane Oxygen/Propane Based: SC40-0 thru SC40-4 SC46-2 thru SC46-6 SC50-0 thru SC50-9
SC945	75°	4'/1.2m	
SC949	90°	4'/1.2m	
SC940	180°	4'/1.2m	Oxygen/Propylene: SC60-0 thru SC60-6 SC2-2, SC2-4
SC955	75°	5'/1.5m	
SC959	90°	5'/1.5m	
SC950	180°	5'/1.5m	
SC965	75°	6'/1.8m	
SC969	90°	6'/1.8m	
SC960	180°	6'/1.8m	

NOTE: Contact factory for extended lengths.

Recommended High Flow Regulators

Model Number	Gas	Outlet (PSIG) Pressure	Type
40-175-540	Oxygen	0-175	Cylinder
40-15-510	LP Gas	0-650	Cylinder
46-175	Oxygen	0-175	Manifold
46-50	LP Gas	0-50	Manifold
40-275-540	Oxygen	0-275	Oxy

*Equipped with stainless steel diaphragm and rear entry cylinder connection.



Cylinder Regulator



Manifold Regulator



Available
Regulator Hard Hat™
protects gauges
from damage.
Part #HB190



Part #
H743
(pair)

- The Smith Oxygen Flashback Arrestors shown here may be used on tips up to size 5.
- Tips ranging from Size 6-9 require high capacity Oxygen Flashback Arrestors. We Recommend Ibenda Brand:
Part # - 0701-3021 - Fuel Gas
Part # - 0701-3022 - Oxygen
For more info go to: www.oxyfuelsafety.com



Warning!
High flow capacity flashback arrestors must be attached to the torch before operating!

LONGEST LASTING TIPS YOU CAN BUY

Whatever your application, whatever your fuel gas, there's a Smith Slicer™ tip to provide fast, economical and quality cutting. Soft seats are not prone to damage like metal-to-metal seats, providing consistent seating and much longer life than metal to metal seats.

Authentic Smith tips must be used and accompany Smith torches to qualify for warranty repair. Aftermarket tips are often the cause of poor performance or malfunction.

Wide Variety of Fuel Gases

Select from quality tips for dependable performance with: acetylene, propane, propane base gases, propylene, natural gas and many more.

Wide Range of Tip Styles & Sizes

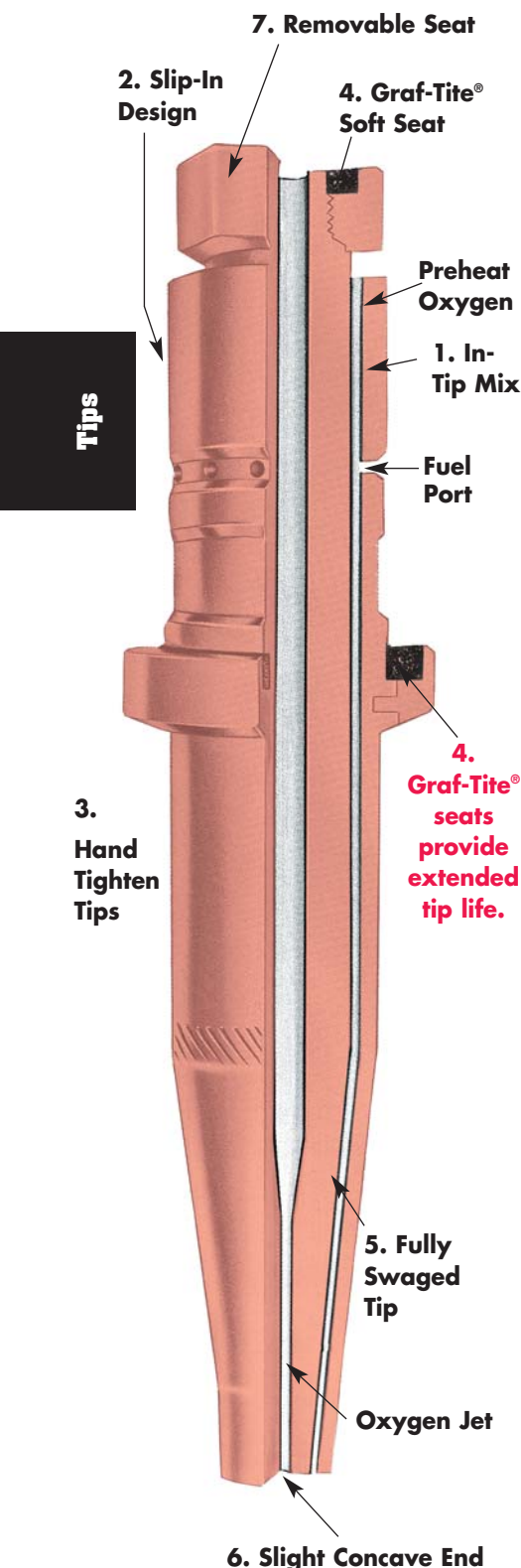
Select the tip to match the job. It's faster, gives a cleaner cut, saves on cleanup and machining, saves gas and cuts expensive labor time.

These tips are for: hand cutting, machine cutting, heavy cutting - up to 24" (610mm), gouging, bulkhead cutting, bevel cutting, heating, rivet cutting, piercing, thin plate cutting, flue cutting, rivet washing, rivet blowing, welding and riser cutting. Several different sizes cover the complete range from thin sheet metal (less than 1/8" - 3mm) up to 24" (610mm) thick steel.

FEATURE BENEFITS







- 1 In-Tip Mix Provides Added Resistance to Flashback**
Each tip is a precision engineered mixer for combining preheat oxygen and fuel gas to attain maximum efficiency.
- 2 Slip-In Design Saves Time and Money**
Quick, easy tip change encourages use of right tip for the job.
- 3 Hand Tighten Tips - No Wrench Needed!**
After the first tightening with a wrench, all that's needed to seat the tip snugly is hand-tightening. No need to search for a wrench to change tips; threads on tip nut won't be stripped by over-tightening.
- 4 Soft Graf-Tite® Flexible Seats End Reseating Repairs**
Compressible soft seats are practically indestructible and they withstand very high temperatures, resulting in longer tip life.
- 5 Fully Swaged Tip Minimizes Gas Turbulence**
Mirror smooth gas passages deliver stable gas flows for high heat transfer, fast starts and clean cuts, also, minimizes slag build-up, and reduces clean-up time.
- 6 Concave Shaped Tip End**
Reduces backfire and resists flameout when making accidental contact with base metal during cutting operations.
- 7 Removable High Pressure Seat**
Allows cleaning from back of tip.

100% FLAME TESTED AND INSPECTED



Guide For Heavy & Medium Duty Tips

Heavy Duty SC Series Tips

ACETYLENE	PROPYLENE	PROPANE	NAT. GAS
 SC12	 SC60	 SC46	
 SC56*		 SC40	
		 SC50*	

NOTE: Last digit in tip part number indicates tip size.
i.e. - SC12-3 has Size 3 cutting orifice.

CAUTION: When using liquid oxygen, tips may require greater gas volume than a single cylinder is capable of producing. External evaporators or manifolding multiple cylinders may be necessary to supply sufficient gas flows.

Medium Duty MC Series Tips

 MC12	 MC60	 MC40
ONE PIECE	TWO PIECE	

* Heavy Duty Preheat

TIP SERIES	APPLICATIONS AND CHARACTERISTICS
SC12, MC12	General cutting operations, medium preheat.
SC46	Dirty, heavily coated metals. Rugged use (scrapping, heavy construction). Used where excessive reflected heat is present.
SC56	Dirty, coated metal. Heavy preheat for faster starts. CAUTION: Manifolding may be necessary for large tips with acetylene.
SC50	Coated metals. Heavy preheat for faster starts. Excellent for scrapping operations.
SC40, 60 MC40, 60	General cutting operations, medium preheat.

TIP CHART INFORMATION

PRESSURE AND FLOW DATA: Cutting data charts are intended as a guide for quality cutting. The data was gathered under ideal shop conditions and on new, clean steel using three-hose machine cutting torches mounted on a portable cutting machine. All pressure settings are flowing pressures. Unless noted otherwise data is based on 25' (7.6m) of 1/4" (6mm) I.D. hose. Pressure must be increased if longer or smaller I.D. hose is used. Preheat flow will normally yield 4-6 second edge starts and 15-20 second pierce starts on 1" (25.4mm) material for SC series cutting tips, and on 1/2" (13mm) material for MC series tips.

HOSES: Do not use excessively long hoses or hoses with many hose unions, either will restrict gas flow and pressure causing lower cutting efficiency and possibly leading to dangerous operating conditions.

MANIFOLDING CYLINDERS: When required flows (cubic feet per hour - SCFH) exceed the recommended withdrawal rate from one cylinder then additional cylinders must be manifolded to provide safe and efficient operation. Acetylene must not be withdrawn at more than 1/7 of the cylinder capacity (47 SCFH for a 330 cu. ft. cylinder). Consult your gas supplier for manifolding instructions for the gases and cylinders supplied to you.

AVAILABILITY: Some tips included in Technical Data may no longer be available. Non-current tips have been included in this section for cross reference purposes.

FUEL GAS CHART

Generic Name	Trade Name
Acetylene	—
Propane, Propane-Based Mixtures	Propane-butane, Flamex, Acetogen, Chem-O-Lene, FL. Industrial Gas, Hy-Temp, Fuel Gas, I.G. Gas, Chem-Gas, Lingas, Chemtane
Propylene	HPG, Apachi, B-Plus, Gulf HP Gas, HEF, B.T.U., Liquifuel
Natural Gas (Methane)	Natural Gas, City Gas

Heavy Duty "SC" Acetylene



SC12 Series

SC12 Series

Six preheat cutting tips for general hand and machine cutting. Provides excellent preheat characteristics required for machine cutting.

USE IN: Cutting Attachments - DG200 & SC200 Series
(Maximum size SC12-5). All SC & DG Series Hand Torches. All Machine Torches.

Oxy-Acetylene

Tips

Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Consumption - SCFH				Drill Size	
			Cutting Oxygen		Preheat			Oxygen		Fuel Preheat	Speed I.P.M.	Cutting Jet	Preheat
	Inches	mm	Reg.	Torch	Oxy	Acety.		Cutting	Preheat				
SC12-00	3/16"	5	20	20	10†	10	.050	24	7	6.5	26	68	75
SC12-0	1/4"	6	30	30	10†	10	.055	40	7.5	7	22	62	74
SC12-0	3/8"	10	35	35	10†	10	.055	50	7.5	7	20	62	74
SC12-1	1/2"	13	35	35	10†	10	.080	75	11	9.5	19	56	71
SC12-1	5/8"	16	40	40	10†	10	.080	85	11	9.5	17	56	71
SC12-2	3/4"	19	36	35	10†	10	.095	105	12	10.5	16	54	70
SC12-2	1"	25	41	40	10†	10	.095	115	12	10.5	14	54	70
SC12-2	1-1/4"	32	51	50	10†	10	.095	135	12	10.5	13	54	70
SC12-3	1-1/2"	38	42	40	10†	10	.100	170	14	12	12	51	68
SC12-3	2"	51	47	45	10†	10	.100	180	14	12	10	51	68
SC12-4	2-1/2"	64	38	35	10†	10	.125	240	15	13	9	45	62
SC12-4	3"	76	44	40	10†	10	.125	265	15	13	8	45	62
SC12-4	4"	102	54	50	10†	10	.125	315	16	14	7	45	62
SC12-5	5"	127	56	50	10†	10	.150	420	30	26*	7	41	57
SC12-5	6"	152	67	60	10†	10	.150	485	30	26*	6	41	57
SC12-5	8"	203	78	70	10†	10	.150	550	30	26*	5.5	41	57
SC12-6	10"	254	83	70	10†	10	.230	750	32	28*	5	32	57
SC12-6	12"	305	125	90	10†	10	.230	975	32	28*	4.5	32	57

† Listed pressure for 3-hose machine cutting torches only. * Minimum of one 350 cu. ft. cylinder required.

WARNING: High gas withdrawal rates will require cylinder manifolding. Consult your gas supplier.

Heavy Duty "SC" Acetylene



Heavy Duty Cutting
SC56 Series

SC56 Series Heavy Preheat

Heavy preheat cutting tips designed for cutting coated metals, heavy piercing, fast preheating and cutting thick steel sections up to 24" (610mm).

USE IN: Cutting Attachments - DG200 & SC200 Series
(Maximum size SC56-5). All SC & DG Series Hand Torches.
2-Hose Machine Cutting Torches (Maximum size SC56-7). 3-Hose Machine Cutting Torch.

Oxy-Acetylene

Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Consumption - SCFH			Speed I.P.M.	Drill Size		Recm'd No. of Cylinders*
			Cutting Oxygen		Preheat PSI			Oxygen		Fuel		Cutting Jet	Preheat	
	Inches	mm	Reg.	Torch	Oxy	Fuel		Cutting	Preheat	Preheat				
SC56-1	1/2"	13	35	35	10†	10	.080	75	33	30	19	56	65	1
SC56-1	5/8"	16	40	40	10†	10	.080	85	33	30	17	56	65	1
SC56-2	3/4"	19	36	35	10†	10	.095	105	33	30	16	54	60	1
SC56-2	1"	25	41	40	10†	10	.095	115	33	30	14	54	60	1
SC56-2	1-1/4"	32	51	50	10†	10	.095	135	33	30	13	54	60	1
SC56-3	1-1/2"	38	42	40	10†	10	.100	170	43	39	12	51	57	1
SC56-3	2"	51	47	45	10†	10	.100	180	50	45	10	51	57	1
SC56-5	2" - 5"	127	56	50	10†	10	.150	420	57	52	7	41	54	2
SC56-5	6"	152	67	60	10†	10	.150	485	66	60	6	41	54	2
SC56-5	8"	203	78	70	10†	10	.150	550	72	65	5.5	41	54	2
SC56-7	8" - 14"	356	100	85	10†	10	.250	1250	110	100	4	28	54	2
SC56-9	14" - 20"	508	110	70	14†	12	.350	2150	145	130	3	3	54	3
SC56-9	24"	610	130	85	15†	13	.360	2600	175	160	2.5	3	54	4

† Listed pressure for 3-hose machine cutting torches only. Pressures shown are for 25' (7.6m) or less of 3/8" (10mm) I.D. hose. Increase pressures if longer hose is used. Use 1/2" (13mm) I.D. hose when hose length exceeds 100' (31m). * Cylinders required, based on 350 cu. ft. cylinder

Heavy Duty "SC" / Propane, Natural Gas, Propylene



SC40 Series
Standard Preheat
Two-Piece

SC40 Series

Two-piece medium preheat cutting tips for general hand and machine cutting with propane, propane base fuel gases and natural gas.

USE IN: All SC & DG Series Hand Torches, Machine Cutting Torches & Cutting Assemblies.

Oxy-Propane
Oxy-Natural Gas

Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Gas Consumption - SCFH			Speed I.P.M.	Drill Size Cutting Jet
			Cutting Oxygen		Preheat			Oxygen		Fuel Preheat		
	Inches	mm	Reg.	Torch	Oxy	Propane		Cutting	Preheat			
SC40-0	1/4"	6	30	30	10†	10	.055	40	38	8	22	62
SC40-0	3/8"	10	35	35	10†	10	.055	50	38	8	20	62
SC40-1	1/2"	13	35	35	10†	10	.080	75	38	8	19	56
SC40-1	5/8"	16	40	40	10†	10	.080	85	38	8	17	56
SC40-2	3/4"	19	36	35	10†	10	.095	105	38	8	16	54
SC40-2	1"	25.4	41	40	10†	10	.095	115	38	8	14	54
SC40-2	1-1/4"	32	51	50	10†	10	.095	135	38	8	13	54
SC40-3	1-1/2"	38	42	40	10†	10	.100	170	38	8	12	51
SC40-3	2"	51	47	45	10†	10	.100	180	38	8	10	51
SC40-4	2-1/2"	64	38	35	12†	10	.125	240	65	15	9	45
SC40-4	3"	76	44	40	12†	10	.125	265	65	15	8	45
SC40-4	4"	102	54	50	12†	10	.125	315	65	15	7	45

† Listed pressure for 3-hose machine cutting torches only.



SC36 Series

SC36 One Piece Rugged Duty Cutting

One-piece cutting tips designed for cutting dirty or heavily coated metals for rugged use to include scrapping, heavy construction or where excessive reflected heat is present.

USE IN: Cutting Attachments - DG200 & SC200 Series (Maximum size SC36-4). All SC & DG Series Hand Torches. All Machine Cutting Torches.

Oxy-Propylene

Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Consumption - SCFH			Speed I.P.M.	Cutting Jet	Drill Size Preheat
			Cutting Oxygen		Preheat			Cutting Oxy.	Preheat Consumption				
	Inches	mm	Reg.	Torch	Oxy.	Propylene			Oxy.	Propylene			
SC36-1	1/2"	13	35	35	20	10	.080	75	70	15	19	56	56
SC36-1	5/8"	16	40	40	20	10	.080	85	70	15	17	56	56
SC36-2	3/4"	19	36	35	20†	10	.095	105	70	15	16	54	56
SC36-2	1"	25	41	40	20†	10	.095	115	70	15	14	54	56
SC36-2	1-1/4"	32	51	50	20†	10	.095	135	70	15	13	54	56
SC36-3	1-1/2"	38	42	40	20	10	.100	170	70	15	12	51	56
SC36-3	2"	51	47	45	20	10	.125	180	70	15	10	51	56
SC36-4	2-1/2"	64	38	35	20†	10	.125	240	70	15	9	45	56
SC36-4	3"	76	44	40	20†	10	.125	265	70	15	8	45	56
SC36-4	4"	102	54	50	20†	10	.150	315	70	15	7	45	56

† Listed pressure for 3-hose machine cutting torches only.

Safety • Performance • Durability

Heavy Duty "SC" / Propane, Natural Gas

SC50 General and Heavy Cutting

Heavy preheat two-piece cutting tip series for hand and machine cutting up to 20" (508mm) thick steel.

USE IN: Cutting Attachments - DG200 & SC200 Series
(Maximum size SC50-5) All SC & DG Series Hand Torches.
2-Hose Machine Cutting Torches (Maximum size SC50-6)
All 3-Hose Machine Cutting Torches.

Oxy-Propane Oxy-Natural Gas



SC50 Series - Heavy Preheat - Two-Piece

CAUTION: When using liquid oxygen, tips may require greater gas volume than a single cylinder is capable of producing. External evaporators or manifolding multiple cylinders may be necessary to supply sufficient gas flows.

Tips

PROPANE

Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Gas Consumption - SCFH			Speed I.P.M.	Drill Size Cutting Jet	Recm'd No. of Fuel Gas Cyls.*
			Cutting Oxygen		Preheat			Oxygen		Fuel			
	Inches	mm	Reg.	Torch	Oxy	Propane		Cutting	Preheat	Preheat			
SC50-0	1/4"	6	30	30	10†	10	.055	40	47	13	22	62	1
SC50-0	3/8"	10	35	35	10†	10	.055	50	47	13	20	62	1
SC50-1	1/2"	13	35	35	10†	10	.080	75	70	15	19	56	1
SC50-1	5/8"	16	40	40	10†	10	.080	85	70	15	17	56	1
SC50-2	3/4"	19	36	35	10†	10	.095	105	70	15	16	54	1
SC50-2	1"	25.4	41	40	10†	10	.095	115	70	15	14	54	1
SC50-2	1-1/4"	32	51	50	10†	10	.095	135	75	16	13	54	1
SC50-3	1-1/2"	38	42	40	10†	10	.100	170	75	16	12	51	1
SC50-3	2"	51	47	45	10†	10	.100	180	75	16	10	51	1
SC50-4	2-1/2"	64	38	35	10†	10	.125	240	75	16	9	45	1
SC50-4	3"	76	44	40	10†	10	.125	265	75	16	8	45	1
SC50-4	4"	102	54	50	10†	10	.125	315	80	17	7	45	1
SC50-5	5"	127	56	50	10†	10	.150	420	80	17	7	41	1
SC50-5	6"	152	67	60	10†	10	.150	485	80	17	6	41	1
SC50-5	8"	203	78	70	10†	10	.150	550	90	20	5	41	1
SC50-6	10"	254	83	70	40†	10	.230	750	230	50	5	32	2
SC50-6	12"	304	125	90	40†	12	.230	975	280	60	4.5	32	2
SC50-7	14"	354	125	90	60†	20	.250	1250	330	62	4.0	28	2
SC50-8	16"	406	125	90	60†	18	.300	1500	375	80	3.5	17	2
SC50-8	18"	457	125	90	60†	20	.340	1800	400	85	3.5	17	2
SC50-9	20"	508	125	90	60†	23	.350	2150	420	90	3.0	3	2

Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Gas Consumption - SCFH			Speed I.P.M.	Drill Size Cutting Jet
			Cutting Oxygen		Preheat			Oxygen		Fuel		
	Inches	mm	Reg.	Torch	Oxy	Natl. Gas		Cutting	Preheat	Preheat		
SC50-0	1/4"	6	30	30	6†	5	.055	40	62	38	22	62
SC50-0	3/8"	10	35	35	6†	5	.055	50	62	38	20	62
SC50-1	1/2"	13	35	35	8†	6	.080	75	70	40	19	56
SC50-1	5/8"	16	40	40	8†	6	.080	85	70	40	17	56
SC50-2	3/4"	19	36	35	8†	6	.095	105	70	40	16	54
SC50-2	1"	25.4	41	40	8†	6	.095	115	70	40	14	54
SC50-2	1-1/4"	32	51	50	8†	6	.095	135	70	40	13	54
SC50-3	1-1/2"	38	42	40	8†	6	.100	170	70	40	12	51
SC50-3	2"	51	47	45	8†	6	.100	180	70	40	10	51
SC50-4	2-1/2"	64	38	35	8†	6	.125	240	75	45	9	45
SC50-4	3"	76	44	40	8†	6	.125	265	75	45	8	45
SC50-4	4"	102	54	50	8†	6	.125	315	75	45	7	45
SC50-5	5"	127	56	50	8†	6	.150	420	82	50	7	41
SC50-5	6"	152	67	60	8†	6	.150	485	82	50	6	41
SC50-5	8"	203	78	70	8†	6	.150	550	82	50	5	41
SC50-6	10"	254	83	70	10†	8	.230	750	120	75	5	32
SC50-6	12"	304	125	90	15†	12	.230	975	165	100	4.5	32
SC50-7	14"	354	125	90	20†	16	.250	1250	200	120	4.0	28
SC50-8	16"	406	125	90	20†	18	.300	1500	220	135	3.5	17
SC50-8	18"	457	125	90	25†	23	.340	1800	250	150	3.5	17
SC50-9	20"	508	125	90	25†	23	.350	2150	250	150	3.0	3

NATURAL GAS

† Listed pressure for 3-hose machine cutting torches only. Regulator pressures are for 50' (13m) of 3/8" (10mm) I.D. hose. If longer or small I.D. hose is used, raise regulator pressures. If more than 100' (31m) of hose is required, use 1/2" (13mm) hose for additional length. *Based on 100 lb. cylinder = approximately 120 SCFH at 70°

Heavy Duty "SC" / Propane, Natural Gas



SC46 Series

SC46 One Piece Rugged Duty Cutting

**Oxy-Propane
Oxy-Natural Gas**

One-piece cutting tips designed for cutting dirty or heavily coated metals for rugged use to include scrapping, heavy construction or where excessive reflected heat is present.

USE IN: Cutting Attachments - DG200 & SC200 Series
(Maximum size SC46-4).
All SC & DG Series Hand Torches.
All Machine Cutting Torches.

PROPANE	Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Consumption - SCFH			Speed I.P.M.	Cutting Jet	Drill Size Preheat
				Cutting Oxygen		Preheat			Cutting Oxy.	Preheat Consumption				
		Oxy.	Propane							Oxy.	Propane			
		Inches	mm	Reg.	Torch	Oxy.	Propane		Oxy.	Propane				
	SC46-2	3/4"	19	36	35	20†	10	.095	105	70	15	16	54	56
	SC46-2	1"	25	41	40	20†	10	.095	115	70	15	14	54	56
	SC46-2	1-1/4"	32	51	50	20†	10	.095	135	70	15	13	54	56
	SC46-4	2-1/2"	64	38	35	20†	10	.125	240	70	15	9	45	56
	SC46-4	3"	76	44	40	20†	10	.125	265	70	15	8	45	56
	SC46-4	4"	102	54	50	20†	10	.150	315	70	15	7	45	56
SC46-5	5"	127	56	50	20†	10	.150	420	105	22	7	41	54	
SC46-5	6"	152	67	60	20†	10	.150	485	105	22	6	41	54	
SC46-5	8"	203	78	70	20†	10	.150	550	105	22	5	41	54	
SC46-6	10"	254	83	70	20†	12	.200	750	105	22	5	32	54	
SC46-6	12"	305	125	90	20†	12	.230	975	105	22	4.5	32	54	

† Listed pressure for 3-hose machine cutting torches only..

NATURAL GAS	Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Consumption - SCFH			Speed I.P.M.	Cutting Jet	Drill Size Preheat
				Cutting Oxygen		Preheat			Cutting Oxy.	Preheat Consumption				
		Inches	mm	Reg.	Torch	Oxy.	Nat. Gas			Oxy.	Nat. Gas			
	SC46-2	3/4"	19	36	35	20†	10	.095	105	70	41	16	54	56
	SC46-2	1"	25.4	41	40	20†	10	.095	115	70	41	14	54	56
	SC46-2	1-1/4"	32	51	50	20†	10	.095	135	70	41	13	54	56
	SC46-4	2-1/2"	64	38	35	20†	10	.125	240	70	41	9	45	56
	SC46-4	3"	76	44	40	20†	10	.125	265	70	41	8	45	56
	SC46-4	4"	102	54	50	20†	10	.150	315	70	41	7	45	56
	SC46-5	5"	127	56	50	20†	10	.150	420	52	52	7	41	54
SC46-5	6"	152	67	60	20†	10	.150	485	52	52	6	41	54	
SC46-5	8"	203	78	70	20†	10	.150	550	52	52	5	41	54	
SC46-6	10"	254	83	70	20†	12	.200	750	90	52	5	32	54	
SC46-6	12"	305	125	90	20†	12	.230	975	90	52	4.5	32	54	

† Listed pressure for 3-hose machine cutting torches only.

Safety • Performance • Durability

Heavy Duty "SC" / Propylene (Also propylene based fuel gases)

SC60 Series

Oxy-Propylene

Two-piece medium preheat cutting tips designed to provide optimum performance with propylene or propylene base fuel gases.

USE IN: Cutting Attachments - DG200 & SC200 Series (Maximum size SC60-5).
All SC & DG Series Hand Torches.
2-Hose Machine Cutting Torches (Maximum size SC60-6).
All 3-Hose Machine Cutting Torches.



SC60 Series Medium Preheat Two-Piece

Tips

Tip Number	Metal Thickness		Pressure - PSIG				Kerf Width	Consumption - SCFH			Speed I.P.M.	Drill Size
			Cutting Oxygen		Preheat PSI			Oxygen		Propylene		Cutting
	Inches	mm	Reg.	Torch	Oxy	Propylene		Cutting	Preheat	Preheat		Jet
SC60-0	1/4"	6	30	30	10†	10	.053	40	38	9	22	62
SC60-0	3/8"	10	35	35	10†	10	.055	50	38	9	20	62
SC60-1	1/2"	13	35	35	10†	10	.080	75	38	9	19	56
SC60-1	5/8"	16	40	40	10†	10	.080	85	38	9	17	56
SC60-2	3/4"	19	36	35	10†	10	.095	105	38	9	16	54
SC60-2	1"	25.4	41	40	10†	10	.095	115	38	9	14	54
SC60-2	1 1/4"	32	51	50	10†	10	.095	135	38	9	13	54
SC60-3	1 1/2"	38	42	40	10†	10	.100	170	38	9	12	51
SC60-3	2"	51	47	45	10†	10	.100	180	38	9	10	51
SC60-4	2 1/2"	64	38	35	12†	10	.125	240	58	15	9	45
SC60-4	3"	76	44	40	12†	10	.125	265	58	15	8	45
SC60-4	4"	102	54	50	12†	10	.125	315	58	15	7	45
SC60-5	5"	127	56	50	12†	10	.150	420	58	15	7	41
SC60-5	6"	153	67	60	12†	10	.150	485	58	15	6	41
SC60-5	8"	203	78	70	12†	10	.150	550	58	15	5	41
SC60-6	10"	254	83	70	12†	10	.230	750	58	15	5	32
SC60-6	12"	305	125	90	12†	10	.230	975	58	15	4.5	32

† Listed pressure for 3-hose machine cutting torches only.

Heavy Duty "SC" Special Purpose / LP Gas

General Gouging - SC2-2 & SC2-4 Oxy-Propane

For removing old welds or cracks, for veeing and groove cutting.



General Gouging SC2-2

Heating - SC112 Oxy-Propane

Provides lots of heat fast with economical LP Gas and Oxygen.
Not recommended for use in cutting assemblies.



Heating SC112

Gouging, Heavy Duty - SC23-3 Oxy-Propane



Gouging SC23-3 SC23-3M

Gouging, Heavy Duty - SC23-3M Oxy-Propylene

For removing old welds or cracks, for veeing and groove cutting.

Use In: DG200 & SC200 Series Cutting Attachments (Except SC112). All SC & DG Series Hand Torches & Machine Torches.

Tip Number	Purpose	Capacity (inches)	Capacity (mm)	Fuel Gas	Oxy Pressure	Fuel Gas Pressure	Oxy Consumption	Fuel Consumption	Oxy Drill Size	Fuel Gas Configuration
SC2-2	Gouging (General)	5/16" wide x 1/8" deep	8 wide x 3 deep	Propane	60	22	389	53	53 31	Slots
SC2-4	Gouging (General)	3/8" wide x 1/4" deep	10 wide x 6 deep	Propane	75	22	564	53	44 28	Slots
SC112	Heating	289,000 BTU's	N/A	Propane	60	25	495	125 *	N/A	Slots
SC23-3	Gouging (Heavy)	3/8" wide x 1/4" deep	10 wide x 6 deep	Propane	50-60	12-18	174	31	50	Slots
SC23-3M	Gouging	1/4" wide x 3/8" deep	6 wide x 10 deep	Propylene	50-60	10-15	174	31	50	Slots

* 2 cylinders required - based on 100 lb. cylinders.



Heavy Duty "SC" Special Purpose / Acetylene



**Gouging
SC13-3**

Gouging Tip SC13-3 & SC13-5

For edge preparation, removal of welds or gouging cracked metals.



**Rivet/Riser Cutting
SC14-3**

Rivet/Riser Cutting - SC14-3

Cuts heads of bolts and rivets. It can also be used in 180° head cutting torch to cut out boiler tubes. Works equally for cutting risers and bulk heads.



**Rivet Blowing & Metal Washing
SC15-2**

Rivet Blowing and Metal Washing - SC15-2

Quickly removes large quantities of metal. Heavy preheat primarily used as a rivet blowing tip, but can be used for stud removal, metal washing, gouging, veeing and groove cutting.



**Plate Cutting
SC17-0**

Plate Cutting - SC17-0

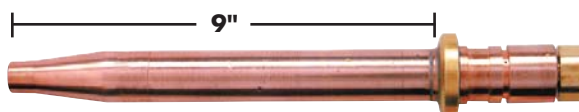
"Drag" style step tip cuts thin sheet metal with absolute minimum burn over and plate warpage.



**Heating
SC83**

Heating - SC83

Delivers large volume of heat quickly for bending, straightening, shrinking, forming and other heating applications. It allows heating with a one piece cutting torch. (For use with hand cutting torches only, not recommended for use with combination torch cutting attachments.)



**Extra Long Cutting Tip
SC12-4X9**

Extra Long Cutting Tip - SC12-4X9

Tip for hard to reach areas. Size 4.

Tips This Page Use In: DG200 & SC200 Series Cutting Attachments (Except SC110 & SC83 Tips). All SC & DG Series Hand Torches & Machine Torches.

Tip Number	Purpose	Capacity (Inches)	Capacity (mm)	Pressures - PSIG @ Reg.		Consumption - SCFH		Drill Size	
				Oxygen	Acetylene	Oxygen	Acetylene	Cutting	Preheat
SC13-3	Gouging	3/8" wide x 1/4" deep	10 wide x 6 deep	20	10	151	35	50-29	59
SC13-5	Gouging	1/2" wide x 3/8" deep	13 wide x 10 deep	25	10	246	50	39-10	55
SC14-3	Riser	1 1/2" rivets	38mm rivets	35-40	10	190	20	51	56
SC15-2	Washing	1/2" wide x 3/8" deep	13 wide x 10 deep	30	10	336	40	3	57
SC17-0	Plate or Thin Sheet Cutting	3/8"	10	20	10	55	4	62	62
SC83	Heating	83,000 BTU's	N/A	15	10	58	52*	NA	56
SC12-4X9	Cutting	4"	102	50	10	331	14	45	62

* 2 cylinders required - based on 350 cu. ft. cylinder.

Medium Duty



MC12 Series

Oxy-Acetylene

Slip-in cutting tips for general medium duty hand cutting.
Use with medium pressure acetylene and oxygen.

**MC12 Series
Oxy-Acetylene**

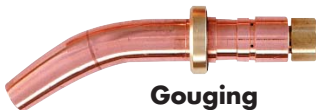
USE IN: *Cutting Attachments - DG109A, MC505, MC509, CC509P (all sizes); AC309 (Maximum tip size MC12-4).*

Tips

Tip Number	Metal Thickness		Pressure - PSIG		Kerf Width	Consumption - SCFH			Drill Size	
						Oxygen		Acety. Preheat	Cutting Jet	Preheat
	Inches	mm	Oxygen	Acety.		Cutting	Preheat			
MC12-00	1/8"	3	20*	10	.050	30	7	6	68	75
MC12-00	3/16"	5	20*	10	.050	30	7	6	68	75
MC12-0	1/4"	6	35*	10	.055	40	7	6	62	75
MC12-0	3/8"	10	40*	10	.055	46	7	6	62	75
MC12-1	1/2"	13	45*	10	.080	75	9	7	55	74
MC12-1	5/8"	16	50*	10	.080	81	9	7	55	74
MC12-2	3/4"	19	50*	10	.095	107	11	9	54	71
MC12-2	1"	25.4	55*	10	.095	118	11	9	54	71
MC12-3	1 1/2"	38	55*	10	.100	170	12	10	51	70
MC12-3	2"	51	60*	10	.100	181	12	10	51	70
MC12-4	2 1/2"	64	65*	10	.125	249	14	12	45	70
MC12-4	3"	76	70*	10	.125	267	14	12	45	70
MC12-4	4"	102	65	10	.125	320	15	13	45	70
MC12-5	5"	127	80	10	.150	420	15	13	41	70
MC12-5	6"	152	90	10	.150	485	15	13	41	70

* Increase pressure 10-15 PSIG when using AC309 cutting attachment.

Medium & Standard Duty "MC" / Acetylene Special Purpose



**Gouging
MC13-3**

Gouging Tip - MC13-3

Oxy-Acetylene

For removing old welds or defects in steel. Heavy preheat. Edge preparation.

USE IN: *Cutting Attachments - DG109A, MC505, AC309, MC509 & CC509P.*

Tip Number	Purpose	Capacity (inches)	Capacity (mm)	Fuel Gas	Oxy Pressure	Fuel Gas Pressure	Oxy Consumption	Fuel Consumption	Oxy Drill Size	Fuel Gas Configuration
MC13-3	Gouging	3/8" wide x 1/4" deep	10 wide x 6 deep	Acetylene	20	10	115	23*	50	60 29

* One cylinder required - based on 350 cu. ft. cylinder.



Medium & Standard Duty “MC” / Alternate Fuel Gas

MC40 Series

Oxy-Propane

Two-piece medium preheat cutting tips for hand cutting with propane and propane base fuel gases.

USE IN: Cutting Attachments - DG109A, MC505, MC509, CC509P; AC309.

MC60 Series

Oxy-Propylene

Two-piece medium preheat tips for hand cutting with propylene and propylene base fuel gases.

USE IN: Cutting Attachments - DG109A, MC505, MC509, CC509P; AC309.

Two-Piece Tips



MC40 Series

Propane & Propane Based Fuels



MC60 Series

Propylene & Propylene Based Fuels

Tips

Tip Number	Metal Thickness		Pressure - PSIG		Consumption - SCFH			Kerf Width	Drill Size Cutting Jet
					Oxygen		Preheat		
	Inches	mm	Oxygen	Propane	Cutting	Preheat	Propane		
MC40-0	1/4"	6	35*	10	40	35	7	.055	62
MC40-0	3/8"	10	40*	10	46	35	7	.055	62
MC40-1	1/2"	13	45*	10	75	35	7	.080	55
MC40-1	5/8"	16	50*	10	81	35	7	.080	55
MC40-2	3/4"	19	50*	10	107	35	7	.095	54
MC40-2	1"	25	55*	10	118	35	7	.095	54
MC40-2	1 1/4"	32	60*	10	133	35	7	.095	54
MC40-3	1 1/2"	38	55*	10	170	35	7	.100	51
MC40-3	2"	51	60*	10	181	35	7	.100	51

Tip Number	Metal Thickness		Pressure - PSIG		Consumption - SCFH			Kerf Width	Cutting Jet
					Oxygen		Preheat		
	Inches	mm	Oxygen	Propylene	Cutting	Preheat	Propylene		
MC60-0	1/4"	6	35*	10	40	26	7	.055	62
MC60-0	3/8"	10	40*	10	46	26	7	.055	62
MC60-1	1/2"	13	45*	10	75	26	7	.080	55
MC60-1	5/8"	16	50*	10	81	26	7	.080	55
MC60-2	3/4"	19	50*	10	107	26	7	.095	54
MC60-2	1"	25	55*	10	118	26	7	.095	54
MC60-2	1 1/4"	32	60*	10	133	26	7	.095	54
MC60-3	1 1/2"	38	55*	10	170	42	11	.100	51
MC60-3	2"	51	60*	10	181	42	11	.100	51

Data based on 25' (7.6m) of 3/16" (5mm) I.D. hose for cutting up to 1 1/2" (38mm) steel and 25' (7.6m) of 1/4" (6mm) I.D. hose for cutting 2" (51mm) steel and above.

* Increase pressure 10-15 PSIG when using AC305 or AC309 cutting attachment.



Safety • Performance • Durability





SW Heavy Duty Welding & Brazing Tips
MW Medium Duty Welding & Brazing Tips
AW Standard Duty Welding & Brazing Tips (Airline™)

SMITH "SOFT FLAME" - Makes Welding Easier

Smith welding tips are quality engineered to provide easy handling, high performance and added protection in welding, brazing and soldering operations.

1

"Soft Flame" - Makes Welding Easier

Smith "soft flame" welding tips provide concentrated heat for better "puddle" control — the turbulent-free flame eliminates puddle chasing. Soft flame provides deep, even penetration without burning through base metal for strong, dependable welds. Molten metal is protected from atmospheric oxidation by smooth, even flame envelope.

2

Slip-In Tips - Permit 360° Turn For Convenient Positioning

Tip may be rotated eliminating hose resistance during operation. "Slip-In" tips can be changed in just seconds. Hand tighten, no wrench needed. "O" rings provide gas tight seal. Keeps gases separate until they mix in the tip.

3

"O" Ring Seals - Highly Reliable Sealing

"O" rings provide gas tight seal with no metal seating surface to damage if dropped. Gases kept separate until entering the mixing chamber.

4

Heavy Wall Copper - Provides Longer Life

The heavy wall copper gives greater resistance to reflected heat, permits cooler operation, dissipates more heat than thin wall copper. Heat absorbing tips provide longer life, and the long straight-away design permits tip refacing after excessive wear or abuse.

100% TESTED - ASSURED PERFORMANCE

Each tip is individually tested on Smith designed automatic testing machines and must pass stringent requirements for flame characteristics, gas flow and resistance to backfire or flashback.

FUEL GAS CHART

Generic Name	Trade Name
Acetylene	—
Propane, Propane-Based Mixtures	Propane-butane, Flamex, Acetogen, Chem-O-Lene, FL Industrial Gas, Hy-Temp, Fuel Gas, I.G. Gas, Chem-Gas, Lingas, Chemtane
Propylene	HPG, Apachi, B-Plus, Gulf HP Gas, HEF, B.T.U., Liquifuel
Natural Gas (Methane)	Natural Gas, City Gas

MANIFOLDING CYLINDERS

When required flows (cubic feet per hour - SCFH) exceed the recommended withdrawal rate from one cylinder then additional cylinders must be manifolded to provide safe and efficient operation. Acetylene must not be withdrawn at more than 1/7 of the cylinder capacity (47 SCFH for a 330 cu. ft. cylinder). Consult your gas supplier for manifolding instructions for the gases and cylinders supplied to you.

Heavy Duty “SW” Series



SW209

SW200 Series

Oxy-Acetylene

The SW200 Series is for general and heavy welding and brazing. Swaged construction provides greater heat concentration for improved “puddle” control. Tips bent to 63-1/2° angle.

USE IN: Torch Handles - WH200 & SW1B.

FUEL GASES: These tips may also be used for brazing with Liquid Air Fuel-Gas or brazing with propylene base fuel gases. When using these gases, select a tip two sizes larger than recommended for the same work as acetylene.

Tip Number	Welding Range		Drill Size	Pressure Each Gas (PSIG) at Reg.	Consumption Each Gas (SCFH)
	Inches	mm			
SW201	1/32	.7	71	10	2.3
SW203	5/64	1.9	67	10	3.2
SW205	1/8	3	57	10	6
SW207	3/16	5	54	10	12
SW209	3/8	10	49	10	23
SW210	1/2	13	44	15	36

Replaceable “O” rings: LW15 (Pkg. of 25).

Consumption (SCFH: cubic feet per hour) figures shown, represent the average volumes of gases consumed when acetylene is added until sooty smoke just disappears from the acetylene flame prior to opening the oxygen valve and adjusting to a neutral flame.

Medium Duty “MW” Series



MW205

MW200 Series

Oxy-Acetylene

MW200 Series is for general purpose medium duty welding which features Smith “soft flame” for easier puddle control and better penetration. Tips are bent to 63-1/2° angle. Replaceable “O” rings: MW15 (Pkg. of 25).

USE IN: Torch Handles - WH100, MW5A & CW5A.

FUEL GASES: These tips may also be used for brazing with Liquid Air Fuel-Gas or brazing with propylene base fuel gases. When using these gases, select a tip two sizes larger than recommended for the same work as acetylene.

Tip Number	Welding Range		Drill Size	Pressure Each Gas (PSIG) at Reg.	Consumption Each Gas (SCFH)
	Inches	mm			
MW201	1/32	.7	71	10	2.3
MW203	5/64	1.9	67	10	3.2
MW205	1/8	3	57	10	6
MW207	3/16	5	54	10	12
MW209	3/8	10	49	10	23

Consumption (SCFH: cubic feet per hour) figures shown, represent the average volumes of gases consumed when acetylene is added until sooty smoke just disappears from the acetylene flame prior to opening the oxygen valve and adjusting to a neutral flame.

Medium Duty “MW” Series

MW400 Series

Oxy-Propane/Natural Gas

General purpose medium duty brazing tip designed specifically for use with propane or propane base mixture fuel gases with oxygen. Also used for melting Platinum, up to 2oz. Replaceable “O” rings: MW15 (Pkg. of 25).

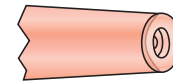
USE IN: Torch Handles - WH100, MW5A & CW5A.



MW411

Tips

Tip Number	Pressure (PSIG)		Consumption Each	
	Oxygen	Propane	Oxygen	Propane
MW411	11	11	51.9	13



**Tip End Recessed For
Propane or Natural Gas**

Standard Duty “AW” Series

AW200 Airline™ Series

Oxy-Acetylene

General purpose standard duty welding/brazing tips. Shorter, lighter and easier to handle. Replaceable “O” rings: AW15 (Pkg. of 25).

USE IN: Torch Handles - AW1A & AW10A.

FUEL GASES: These tips may also be used for brazing with Liquid Air Fuel-Gas or brazing with propylene base fuel gases. When using these gases, select a tip two sizes larger than recommended for the same work as acetylene.



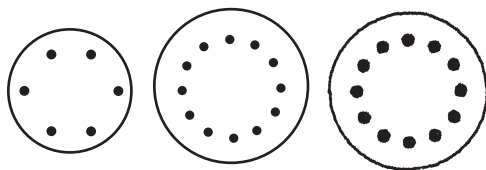
AW205

Tip Number	Welding Range		Drill Size	Pressure Each Gas (PSIG) at Reg.	Consumption Each Gas (SCFH)
	Inches	mm			
AW201	Very Light Metal up to 1/32	.7	71	10	2.3
AW203	5/64	1.9	67	10	3.2
AW205	1/8	3	57	10	6
AW207	3/16	5	54	10	12
AW209	3/8	10	49	10	23
AW210	1/2	13	44	11	36

Consumption (SCFH: cubic feet per hour) figures shown, represent the average volumes of gases consumed when acetylene is added until sooty smoke just disappears from the acetylene flame prior to opening the oxygen valve and adjusting to a neutral flame.



Actual Size Tips



ST603

ST605

ST610

used for braze welding or for applying hard facing metal to large areas. Heating tips provide significant cost savings in many applications. By providing great amounts of quick, concentrated heat, heating tips do the job faster and cut labor time to a minimum. For proper performance, use the recommended pressures for each tip and with an adequate gas supply. Manifolding of cylinders is essential for safe and efficient operation of large size heating tips.

Heavy Duty / Oxy-Acetylene



ST605

Heating Tips Used in Welding Handles

Smith's multi-flame and single flame heating tips are designed to provide large volumes of heat for applications such as: heat treating, bending, straightening, pre-heating, brazing, shrinking, forming and many others. Smaller sizes are often

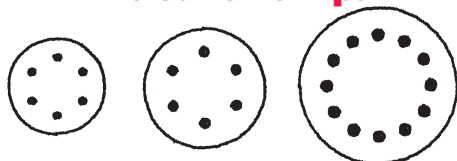
WARNING! MANIFOLDING CYLINDERS: When required flows (cubic feet per hour - SCFH) exceed the recommended withdrawal rate from one cylinder then additional cylinders must be manifolded to provide safe and efficient operation. Acetylene must not be withdrawn at more than 1/7 of the cylinder capacity (50 SCFH for a 350 cu. ft. cylinder). Consult your gas supplier for manifold instructions for the gases and cylinders supplied to you. Refer to Technical Data on website.

Tips

Stock No.	No. of Flames	Drill Size	Pressures (PSIG)		Consumption (SCFH)		Average BTU	Fuel ** Cylinders Required	Overall Length Inches/mm
			Oxygen	Fuel Gas	Oxygen	Fuel Gas			
ST602	6	#64	10	10	31	28	40,125	1	16" / 406
ST603	6	#56	15	15	55	50	71,750	1	16" / 406
ST605	12	#57	15	15	96	87	124,670	2	19" / 483
ST610	12	#54	15	15	150	136	194,890	3	19" / 483

****NOTE:** 350 cubic foot minimum cylinder size @ 70° F. / **USED IN:** Torch Handles - SW1A, SW1B & WH200.

Actual Size Tips



MT603

MT605

MT610

Medium Duty / Oxy-Acetylene

Versatile multi-flame heating tips for the popular medium duty torch handles. Used for general heating of metals, brazing, hard surfacing, etc. Heads are manufactured from solid copper.



USED IN: Torch Handles - WH100, MW5A & CW5A.

MT605

Stock No.	No. of Flames	Drill Size	Pressures (PSIG)		Consumption (SCFH)		Average BTU	Fuel Cylinders Required	Overall Length Inches/mm
			Oxygen	Fuel Gas	Oxygen	Fuel Gas			
MT603	6	#64	10	15	31	28	40,125	1	10" / 254
MT605	6	#56	10	15	57	51	73,085	**1	16" / 406
MT610	12	#57	10	15	100	90	128,970	**2	18" / 457

****NOTE:** 350 cubic foot minimum cylinder @ 70° F. **NOTE:** Tips may also be used with oxygen/hydrogen.

Actual Size Tip



Handy light duty multi-flame tip for heating, brazing and applying hard facing metals. Uses medium pressure acetylene and oxygen.

USED IN: Torch Handles - AW1A & AW10A.

Standard Duty Acetylene



AT605

Stock No.	No. of Flames	Drill Size	Pressures (PSIG)		Consumption (SCFH)		Average BTU	Fuel * Cylinders Required	Overall Length Inches/mm
			Oxygen	Fuel Gas	Oxygen	Fuel Gas			
AT605	6	#64	10	15	32	29	41,550	1	10" / 254

NOTE: Tips may also be used with oxygen/hydrogen.

* Require minimum 200 cu. ft. acetylene cylinder size.

CAUTION: Heating tips must be used in conjunction with high flow flashback arrestors. It may be necessary to increase outlet pressures to compensate for flow restrictions that may be created by flashback arrestors.

Heavy Duty - Oxy-LP



Medium pressure oxy-propane or propane based heating tips provide high heating performance with low cost fuel gases including natural gas and propane based gases.

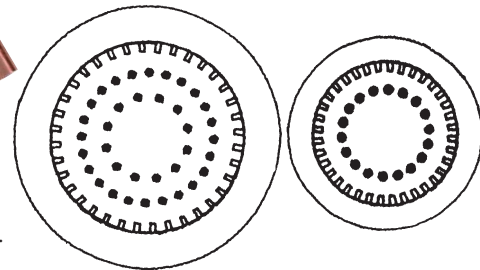
USED IN: Torch Handles - WH200 & SW1B.

NOTE: ST635 requires 3/8" I.D. (10mm) hose and HB1522B-510 propane cylinder regulator.

CAUTION: Heating tips must be used in conjunction with high flow flashback arrestors.

It may be necessary to increase outlet pressures to compensate for flow restrictions that may be created by flashback arrestors.

Actual Size Tips



ST625
ST628

ST615

Tips

Stock No.	No. of Flames	Uses	Pressures (PSIG)		Consumption (SCFH)		Average BTU	** Fuel Cylinders Required	Overall Length	Head PN
			Oxygen	Fuel Gas	Oxygen	Fuel Gas				
ST615	Fluted	Propane	23-65	10-28	225-535	70-160	244,000	1-2	15-3/4" (400mm)	1495
		Natural Gas	18-55	10-28	175-450	96-267	155,145	N/A		
		Propylene	20-60	10-28	235-430	100-160	280,000			
ST625		Propane	50-110	17-28	480-1000	140-280	455,000	2-3	31-1/2" (800mm)	1504
		Natural Gas	43-80	18-28	390-785	200-450	313,950	N/A		
ST635		Propane	70-115	18-40	670-1580	185-480	614,195	2-4	31-1/2" (800mm)	1499

****Note:** Continuous use with 100 lb. propane tanks @ 70° F.

Head and Mixer Assemblies

USED IN: Torch Handles - WH200 & SW1B

Custom built heating tips for maximum versatility in heating operations. Make any length heating tip. All that is required is to add the desired length of pipe (with 1/4" NPT pipe thread on either end) and attach to the heating assemblies. Pipe is not supplied.

Head and Mixer Assemblies ONLY



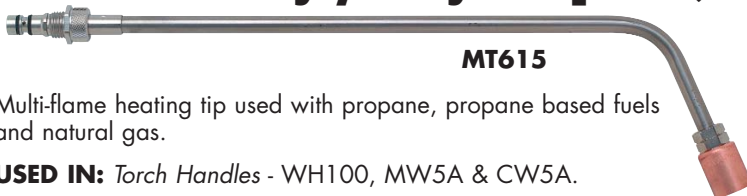
ST628 Any Length Pipe May Be Used

Stock No.	No. of Flames	Uses	Pressures (PSIG)		Consumption (SCFH)		Average BTU	**Fuel Cylinders Required	Head PN
			Oxygen	Fuel Gas	Oxygen	Fuel Gas			
ST628*	Fluted	Propane	50-110	17-28	480-1000	140-280	455,000	2-3	1504
		Natural Gas	43-80	18-28	390-785	200-450	313,950		

*Head and Mixer Assembly Only

****Note:** Continuous use with 100 lb. propane tanks @ 70° F.

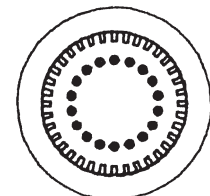
Medium Duty / Oxy-Propane, Natural Gas



Multi-flame heating tip used with propane, propane based fuels and natural gas.

USED IN: Torch Handles - WH100, MW5A & CW5A.

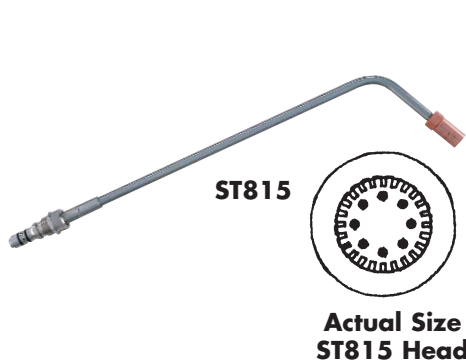
Actual Size Tip



Stock No.	No. of Flames	Uses	Pressures (PSIG)		Consumption (SCFH)		Average BTU	**Fuel Cylinders Required	Overall Length	Head PN
			Oxygen	Fuel Gas	Oxygen	Fuel Gas				
MT615	Fluted	Propane	20-60	10-25	225-535	70-160	286,350	1-2	19" (483mm)	1495
		Natural Gas	15-50	10-25	175-450	96-267	181,500			

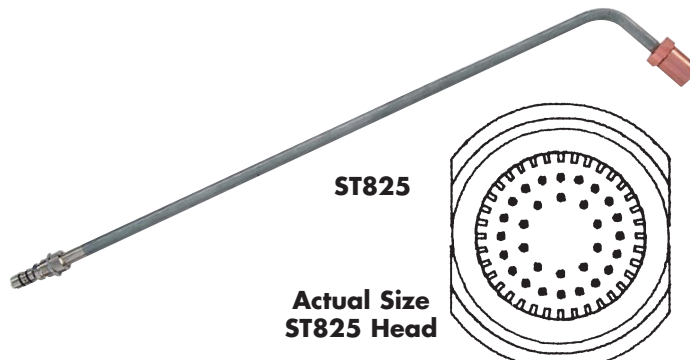
****Note:** Continuous use with 100 lb. propane tanks @ 70° F.

Heavy Duty / Propylene



ST815 - Medium capacity tip:
Use in WH200 &
SW1B handles.

Torch Head Stock No. 4642



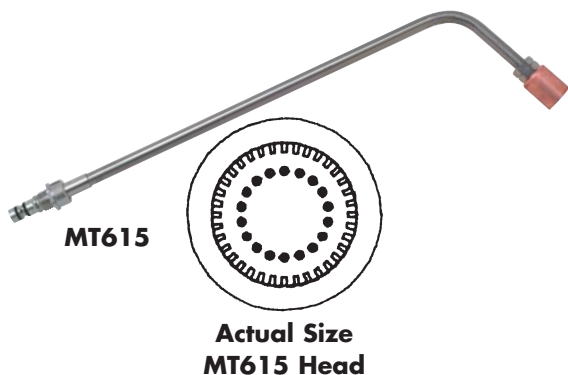
ST825 - High capacity heating tip:
Use in WH200 & SW1B torch handles
with 3/8" (10mm) I.D. hoses.

Torch Head Stock No. 4639

Stock No.	No. of Flames	Uses	Pressures (PSIG)		Consumption (SCFH)		Average BTU	**Fuel Cylinders Required	Overall Length
			Oxygen	Fuel Gas	Oxygen	Fuel Gas			
ST815	Fluted	Propylene	37-77	13-37	390-655	120-235	415,000	1-2	20-1/2" (521mm)
ST825			60-110	20-35	580-1500	225-525	830,000	2-5	31" (787mm)

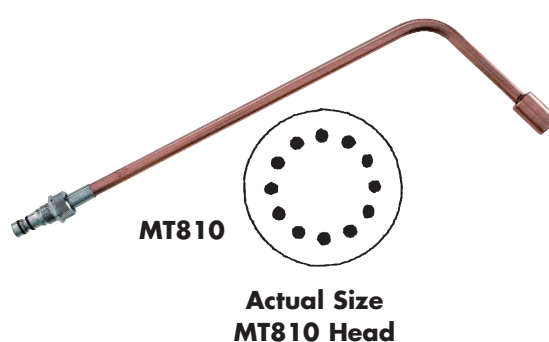
****Note:** Continuous use with 105 lb. propylene cylinders @ 70° F.

Medium Duty / Propylene



MT615 & MT810 - Medium capacity tip: Use in WH100, MW5A & CW5A torch handles.

MT615 Torch Head Stock No. 1495



Stock No.	No. of Flames	Uses	Pressures (PSIG)		Consumption (SCFH)		Average BTU	**Fuel Cylinders Required	Overall Length
			Oxygen	Fuel Gas	Oxygen	Fuel Gas			
MT615	Fluted	Propylene	20-60	10-25	235-430	100-160	280,000	2	19" (483mm)
MT810	12		15-35	40-70	120-160	42-58	115,000	1	18" (457mm)

****Note:** Continuous use with 105 lb. propylene cylinders @ 70° F.

CAUTION: Heating tips must be used in conjunction with high flow flashback arrestors. It may be necessary to increase outlet pressures to compensate for flow restrictions that may be created by flashback arrestors.



Special Heavy Duty Heating Tip

JX16 Aluminum Extrusion Cutting Tip **Oxy-Propane or Natural Gas**

Used to "cut" aluminum extrusions - actually melts the aluminum rather than cutting it as a standard tip cuts steel for a straight edge cut. The JX16 is perfect for use in aluminum extrusion mills and in any other situation where similar cuts are needed. Can also be used as a heating tip. May also be used to texturize stone/brick. Uses LP Gas or Natural Gas with Oxygen.

The head of the JX16 contains 42 orifices, drill sizes #60.

USED IN: Torch Handle - SW1B & WH200.



Length - 14-1/2" (368mm)
Head Size
1" X 3-9/16" X 1/2"
(25.4mm X 90mm X 13mm)

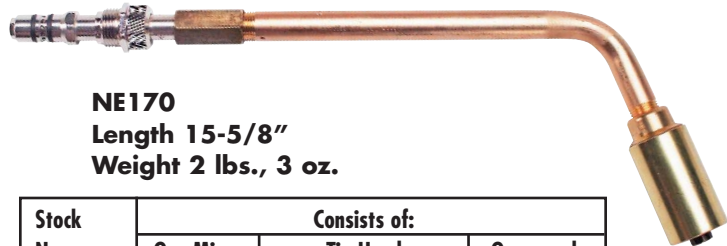
JX16



Tip End Illustration

Tips

Tip Number	Pressure (PSIG)				Propane Consumption (SCFH)		Heat Output BTU/Hour	
	Nat. Gas	Oxy.	Propane	Oxy.	Fuel	Oxy.	Propane	Nat. Gas
JX16	25	80	25	60	128	502	297,000	130,000



NE170
Length 15-5/8"
Weight 2 lbs., 3 oz.

Stock No.	Consists of:		
	Gas Mixer	Tip Head	Gooseneck
NE170	ST625B	NE171 86,000 BTU's/HR	NE171-1

Heavy Duty / Oxy-LP

NE170 Propane/Natural Gas Compressed Air Heating Tip

Produces concentrated flame not normally possible with low cost natural gas. Ideal for a wide range of heating applications including die casting. Produces temperatures of 3400°F with natural gas and 3500°F with propane. Operates on gas pressures of 2-10 PSIG and 10-100 PSIG compressed air. For maximum heat output, a minimum of 30 PSIG air is required. Fits WH200 handle.



15674
Thermite Heating Tip (Railroad)

Five minute style heating tip for thermite rail welding.

Gas Pressures:

Oxygen65 PSIG
Propane15 PSIG

Gas Consumption:

Propane70 SCFH
Oxygen275 SCFH

BTU Output:150,000

Fits SW1A, SW1B or WH200 handles.

Overall length 15-1/2".

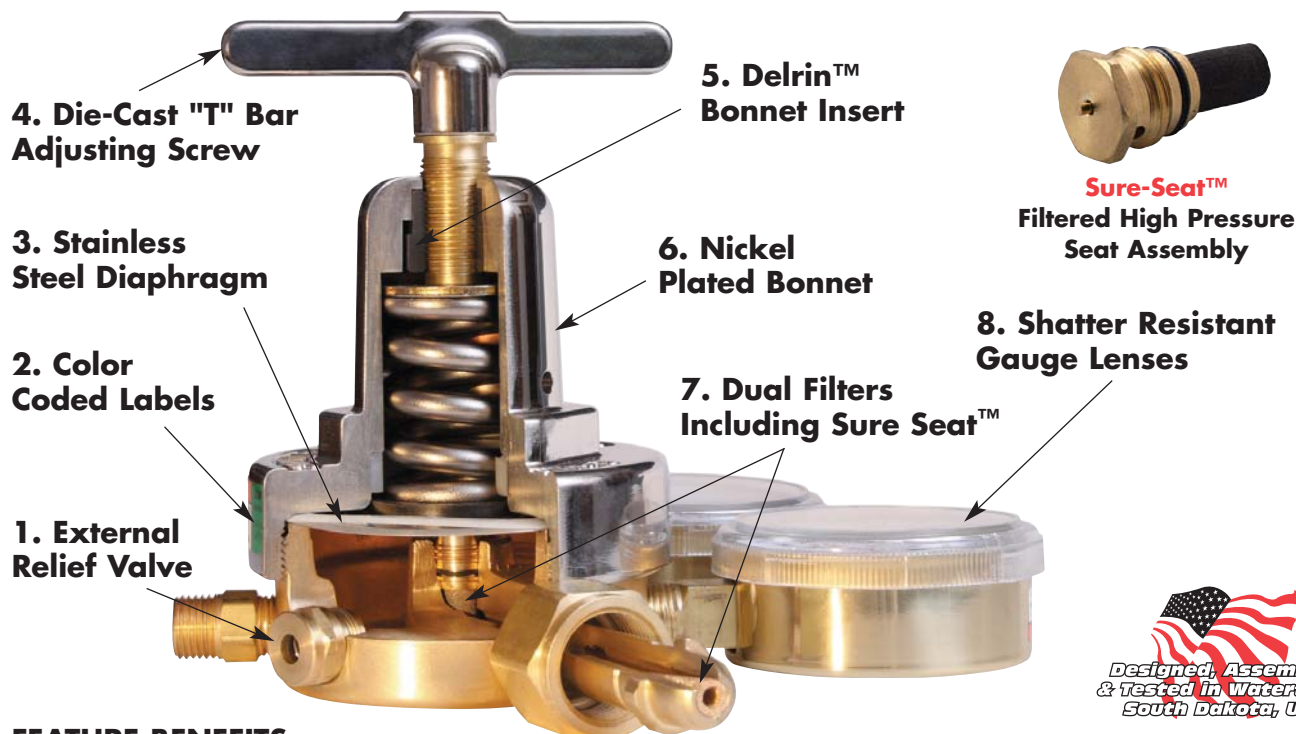
Heavy Duty / Oxy-Propane

CAUTION: When using liquid oxygen, tips may require greater gas volume than a single cylinder is capable of producing. External evaporators or manifolding multiple cylinders may be necessary to supply sufficient gas flows.

WARNING!

MANIFOLDING CYLINDERS: When required flows (cubic feet per hour - SCFH) exceed the recommended withdrawal rate from one cylinder then additional cylinders must be manifolded to provide safe and efficient operation.

Premium Heavy Duty Series 40™ (Single Stage Pressure Regulators)



Regulators
Flowmeters

*Designed, Assembled
& Tested in Watertown,
South Dakota, USA*

FEATURE BENEFITS

- | | |
|--|--|
| <p>1 External Relief Valve
Protects regulator from damage due to inadvertent high pressure surge.</p> | <p>5 Delrin™ Bonnet Insert
Allows smooth, easy adjustment even at high pressure levels.</p> |
| <p>2 Color Coded Labels
Supply performance capabilities and easy gas service identification.</p> | <p>6 Nickel Plated Bonnet
Along with brass body protect against corrosion.</p> |
| <p>3 Stainless Steel Diaphragm
Resists damage and freeze-up if used with liquid gases for extended service life.</p> | <p>7 Dual Filters Including Sure Seat™
Protects high pressure seat from debris for reliable operation and long service life.</p> |
| <p>4 Die-Cast "T" Bar Adjusting Screw
Provides comfort and durability.</p> | <p>8 Shatter Resistant Gauge Lenses
2-1/2" Brass gauges with Polycarbonate lenses resist damage and corrosion.</p> |



Rugged Series 40™ high flow capacity regulators are designed to handle the most demanding jobs. Constructed with Smith's Sure-Seat™ technology and a stainless steel diaphragm they are built to last.



**Series 40™ Regulators
with Hard Hat™
Gauge Protectors**

3 Year Limited Warranty

Heavy Duty Single Stage Series 40™ Regulators



Regulator
With Hard Hat™

BRASS CONSTRUCTION FOR DEPENDABLE SERVICE IN CORROSIVE ATMOSPHERES

Series 40™ single stage regulators comprise a complete line of versatile regulators for welding, cutting, heating and other industrial applications. Heavy duty construction and simplified design provides high gas flow and longer trouble-free operation. Stainless steel diaphragm allows use with liquid gases.

Regulators
Flowmeters

Flow Data & Cross Reference
to old model numbers
available on Smith Website
under Tech & Safety Info.
smithequipment.com

PART# DEFINITION

Example: **40-15-510**

40 → SERIES
15 → MAXIMUM OUTLET PRESSURE
510 → CYLINDER CGA CONNECTION

**3 Year
Limited
Warranty**

Oxygen Regulators

Stock Number	Gas Used	Delivery Pressure	Gauges (2-1/2" / 64mm Dia.)		Inlet Connection	Outlet Connection	Max Inlet Pressure
			Inlet	Outlet			
40-175-540	Oxygen	0-175 PSIG	4000 PSIG	200 PSIG	CGA 540	9/16"-18 RH "B"	3000 PSIG 207 Bar
40-175-540S*		0-12 Bar	276 Bar	14 Bar			
40-275-540		6-275 PSIG 0-19 Bar		400 PSIG 14 Bar			

Acetylene Regulators

Stock Number	Gas Used	Delivery Pressure	Gauges (2-1/2" / 64mm Dia.)		Inlet Connection	Outlet Connection	Max Inlet Pressure
			Inlet	Outlet			
40-15-300	Acetylene	0-15 PSIG	400 PSIG	30 PSIG	CGA 300	9/16"-18 LH "B"	400 PSIG
40-15-300S*		0-1 Bar	28 Bar	2 Bar	CGA 510		28 Bar
40-15-510							
40-15-510S*							

Propane, Propylene & Natural Gas Regulators

Stock Number	Gas Used	Delivery Pressure	Gauges (2-1/2" / 64mm Dia.)		Inlet Connection	Outlet Connection	Max Inlet Pressure
			Inlet	Outlet			
40-50-510	LP Gas	0-50 PSIG 0-3 Bar	400 PSIG 28 Bar	60 PSIG 4 Bar	CGA 510	9/16"-18 LH "B"	400 PSIG 28 Bar

Other Gases

Stock Number	Gas Used	Delivery Pressure	Gauges (2-1/2" / 64mm Dia.)		Inlet Connection	Outlet Connection	Max Inlet Pressure
			Inlet	Outlet			
40-275-580	Nitrogen	0-275 PSIG 0-19 Bar	4000 PSIG 276 Bar	400 PSIG 28 Bar	CGA 580	5/8"-18 RH Internal	3000 PSIG 207 Bar

* Includes HB190 "Hard Hat™" Gauge Guard.

ACCESSORIES



**HB190
"Hard Hat"™
Gauge/Regulator
Guards
see page 70**

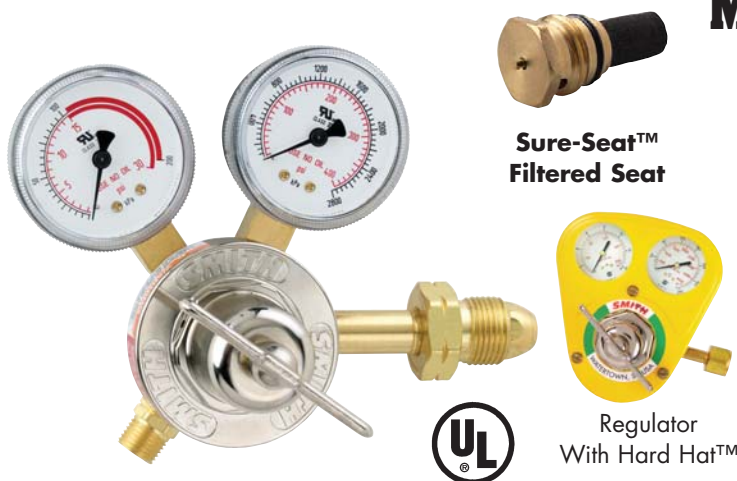


**Check Valves
see page 68**



**Flashback
Arrestors
see page 67**

Medium Duty Single Stage Series 30™ Regulators



**Sure-Seat™
Filtered Seat**

**Regulator
With Hard Hat™**

Flow Data & Cross Reference
to old model numbers
available on Smith Website
under Tech & Safety Info.
smithequipment.com

PART# DEFINITION
Example: 30-15-510
30 → SERIES
15 → MAXIMUM OUTLET PRESSURE
510 → CYLINDER CGA CONNECTION

Rugged medium duty industrial grade regulators are extremely durable and contain Smith's exclusive Sure Seat™ filtered seat technology for extended seat and regulator life. Filtered seat prevents contamination from entering the seating area reducing repair costs and down-time. These highly accurate regulators are manufactured with a rugged forged body and corrosion resistant bright nickel-plated bonnet. Series 30™ regulators are backed by a 3 year limited warranty.

3 Year Limited Warranty

Regulators
Flowmeters

Oxygen Regulators

Stock Number	Gas Used	Delivery Pressure	Gauges (2"/51mm Dia.)		Inlet Connection	Outlet Connection	UL Listed Max Inlet Pressure
			Inlet	Outlet			
30-100-540	Oxygen	0-100 PSIG 0-7 Bar	4000 PSIG 276 Bar	150 PSIG 10 Bar	CGA 540	("B") 9/16"-18 RH	3000 PSIG 207 Bar
30-20-540		0-20 PSIG 0-1 Bar		30 PSIG 2 Bar			

Acetylene Regulators

Stock Number	Gas Used	Delivery Pressure	Gauges (2"/51mm Dia.)		Inlet Connection	Outlet Connection	UL Listed Max Inlet Pressure
			Inlet	Outlet			
30-15-510	Acetylene	0-15 PSIG 0-1 Bar	400 PSIG 28 Bar	30 PSIG 2 Bar	CGA 510	("B") 9/16"-18 LH	400 PSIG 28 Bar
30-15-300					CGA 300		
30-15-520					CGA 520		
30-15-200					CGA 200		

Propane, Propylene & Natural Gas Regulators

Stock Number	Gas Used	Delivery Pressure	Gauges (2"/51mm Dia.)		Inlet Connection	Outlet Connection	UL Listed Max Inlet Pressure
			Inlet	Outlet			
30-50-510	LP Gas	0-50 PSIG 0-3 Bar	400 PSIG 28 Bar	60 PSIG 4 Bar	CGA 510	("B") 9/16"-18 LH	400 PSIG 28 Bar

Other Gases

Stock Number	Gas Used	Delivery Pressure	Gauges (2"/51mm Dia.)		Inlet Connection	Outlet Connection	UL Listed Max Inlet Pressure
			Inlet	Outlet			
30-150-580	Argon/ Nitrogen	0-150 PSIG 0-10 Bar	4000 PSIG 276 Bar	150 PSIG 10 Bar	CGA 580	5/8"-18 RH Internal	3000 PSIG 207 Bar
30-100-320	CO ₂	0-100 PSIG 0-7 Bar			CGA 320		
30-100-350	Hydrogen/ Methane				CGA 350	"B" 9/16"-18 LH	

ACCESSORIES



**H195
"Hard Hat"™
Gauge/Regulator
Guards
see page 70**



**Check Valves
see page 68**



**Flashback
Arrestors
see page 67**

Two Stage Regulators

SMITH EQUIPMENT®

Series 30™ - 2 Stage



Series 30™ Two Stage Regulators

Drop cylinder pressure to working pressure in two stages for consistent and accurate outlet pressure and flow regardless of inlet pressure. Recommended where outlet pressure and flow must be maintained without variation.

100% TESTED AND INSPECTED

3 Year Limited Warranty

Flow Data & Cross Reference to old model numbers available on Smith Website under Tech & Safety Info.
smithequipment.com



H197
"Hard Hat"™
Gauge/Regulator
Guards
see page 70

Series 35™ Two Stage Regulators

Regulators
Flowmeters

Stock Number	Gas Used	Delivery Pressure	Gauges (2" / 51mm Dia.)		Inlet Connection	Outlet Connection	UL Listed Max Inlet Pressure
			Inlet	Outlet			
35-125-540	Oxygen	0-125 PSIG 0-9 Bar	4000 PSIG 276 Bar	150 PSIG 10 Bar	CGA 540	("B") 9/16"-18 RH	3000 PSIG 207 Bar
35-15-510	Acetylene	0-15 PSIG	400 PSIG	30 PSIG	CGA 510	("B")	400 PSIG
35-15-300		0-1 Bar	28 Bar	2 Bar	CGA 300	9/16"-18 LH	28 Bar
35-50-580	Nitrogen/ Helium/Inert	0-50 PSIG 0-3 Bar	4000 PSIG 276 Bar	60 PSIG 4 Bar	CGA 580	5/8"-18 RH Internal	3000 PSIG 207 Bar

Single Stage Series 36™ Medium Duty & Heavy Duty Series 46™ Station Regulators

Heavy and Medium duty brass line regulators are rugged, accurate and corrosion resistant with shatter resistant polycarbonate gauge lenses.

Stock Number	Gas Used	Delivery Pressure	Gauges Diameter		Outlet Connection	UL Listed Max Inlet Pressure
			Inches	mm		
46-175¹	Oxygen	0-175 PSIG	2 1/2"	64	("B") CGA 24	200 PSIG/14 Bar
36-150¹		0-12 Bar	2"	51	9/16"-18 RH	500 PSIG/35 Bar
46-15²	Acetylene	0-15 PSIG	2 1/2"	64	("B") CGA 25	100 PSIG/7 Bar
36-15²		0-1 Bar	2"	51	9/16"-18 LH	200 PSIG/14 Bar
46-50²	LP Gas	0-50 PSIG	2 1/2"	64		100 PSIG/7 Bar
36-50²		0-3 Bar	2"	51		500 PSIG/35 Bar

¹ "C" size inlet connection CGA 24 (7/8"-14 RH).

Fits station valve NCG No. M960R, Rego. No. 7160.

² "C" size inlet connection CGA 25 (7/8"-14 LH).

Fits station valve NCG No. M961R, Rego. No. 7161.

NOTE: Body inlet 1/4" NPT.

Series 46™ Heavy Duty



Series 36™ Medium Duty



3 Year Limited Warranty

50

"Premium Products Built for a Lifetime"

www.smithequipment.com



Series 30™ Regulator Twin Packs



FEATURE BENEFITS

1. Solid Brass Industrial Construction
2. Durable Teflon® High Pressure Seat
3. Convenient & Economical
4. 100% Tested and Inspected

HTP2

30-100-540

Delivery Press: 0-100 PSIG
Inlet Connection: CGA 540

Oxygen

30-15-510

Delivery Press: 0-15 PSIG
Inlet Connection: CGA 510 Fuel Gas: LP / Acetylene

HTP5

30-100-540

Delivery Press: 0-100 PSIG
Inlet Connection: CGA 540

Oxygen

30-15-300

Delivery Press: 0-15 PSIG
Inlet Connection: CGA 300 Fuel Gas: Acetylene

Regulators
Flowmeters

HVAC/Refrigeration Purge/Leak Test Regulators

Smith's single stage nitrogen regulator is specially designed to meet the specifications of HVAC refrigerant purging applications. This regulator is used with nitrogen to test an HVAC system to locate leaks and to purge an area for installation and repair. Its compact size is suitable for use where space is limited.

- Economical and accurate
- Solid brass body provides durability
- Special Option: Heavy duty charging hose outfitted with appropriate connections.
- Large durable nylon adjusting knob for easy pressure adjustment
- Highly accurate 2" (51mm) gauges with shatter resistant lenses



**H195
Hard Hat™**

Protects gauges from damage
(Remove knob to install)



30-450-580



Stock Number	Gas Used	Delivery Pressure	Gauges (2" / 51mm Dia.)		Inlet Connection	Outlet Connection	Max Inlet Pressure
			Inlet	Outlet			
30-450-580	Nitrogen	0-450 PSIG 31 Bar	4000 PSIG 276 Bar	600 PSIG 41 Bar	CGA 580	7/16"-20 External Flair Fitting	3000 PSIG 207 Bar

SINGLE HOSE FOR NITROGEN

See page 65 for RL260 Nitrogen Hose information.
6' (1.8m) x 1/4" (6mm) Heavy Duty Charging Hose for use with Nitrogen for HVAC Purging Applications. (To Regulator: 7/16"-20 RH Internal • To AC Unit: 7/16"-20 RH w/core)



1 Year Limited Warranty

Safety • Performance • Durability

High Pressure - 820 Series Patented

Heavy Duty High Pressure Regulators

820 Series high pressure regulator series for use on cylinders with a wide variety of non-corrosive inert gases. Piston sensor design gives structural reliability in high pressure use. Low torque control adjusting screw permits easy adjustment of pressures in closed or dead end systems.

TYPICAL APPLICATIONS

- High pressure testing
- Purging and charging
- Calibration kits
- Airline charging carts
- Chemical plants
- Manufacturing processes
- Research and development
- Laboratories

**Regulators May
Be Configured
To Your Specifications**



820 Series

Due to order specific configurations, Smith Equipment can not accept returns of 800 Series regulators.

**3 Year
Limited
Warranty**

**Regulators
Flowmeters**

Product Number	Max. Inlet Press. (PSIG)	Delivery Pressure	Inlet Gauge		Delivery Gauge	
			Range (PSIG)	Graduations (PSIG)	Range (PSIG)	Graduations (PSIG)
823	6,000	0-500	0-10,000	200	0-1,000	100
824	6,000	0-1,000	0-10,000	200	0-4,000	100
825	6,000	0-2,000	0-10,000	200	0-4,000	100
826	6,000	0-4,000	0-10,000	200	0-6,000	100
827	6,000	0-6,000	0-10,000	200	0-6,000	100

CONFIGURATOR EXAMPLE:

825 - 66 - 26

OPTION 1: MODEL SERIES AND OUTLET PRESSURE

823	0-500 PSIG
824	0-1000 PSIG
825	0-2000 PSIG
826	0-4000 PSIG
827	0-6000 PSIG

OPTION 2: OUTLET FITTINGS

00	None
66	1/4" (6mm) MPT Stainless Steel needle valve

OPTION 3: CGA INLET FITTINGS

	Max. CGA Pressure - PSIG
00 None	
08 CGA 540 (Oxygen)	3000
09 CGA 580 (Inert)	3000
26 CGA SS 347	5500
27 CGA SS 677	7500
28 CGA SS 680	5500

NOTE: SS - Stainless Steel

NOTE: Self relieves through bonnet

Special Purpose - 3-Stage Nitrogen - Low Pressure

TO SUPPLY CONSTANT PRESSURE NITROGEN TO OIL-FILLED SUB-STATION POWER TRANSFORMERS

This special purpose regulator is designed to supply constant pressure nitrogen to oil filled sub-station power transformers. This regulator will maintain oil-filled transformer atmospheres at approximately .5 PSIG. This design is constructed with a two stage preset regulator connected to a highly sensitive single stage regulator that maintains a .5 PSIG outlet pressure. A built in self relieving valve set at 8 PSIG protects the system from over-pressurization due to temperature variations. This unit is also designed with a purge valve that has a preset pressure of 8 PSIG which is connected to the second stage allowing quick gas filling of transformers. This highly reliable design provides constant outlet pressure and flow. Adjusting screws are concealed to prevent tampering.

**3 Year
Limited
Warranty**



237-142958C



237-350858A

For version with electronic gauge, contact customer service for availability and quantity requirements.
(15 amp, 125 or 250V AC)

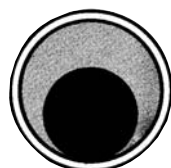
Pre-set Outlet Pressures:
Stage 1 @ 150 PSIG into 2nd Stage
Stage 2 @ 8 PSIG into 3rd Stage
Stage 3 @ .4 to .6 PSIG outlet pressure
Purge Pressure: @ 8 PSIG
Maximum Input Pressure 3000 PSIG
Delivery (Outlet) Pressure Range .4 to .6 PSIG
Outlet Fitting 3/8" FNPT
Purge Valve Outlet 1/4" MNPT
580 CGA inlet cylinder connection
Operating temperature range is -40°F to +160°F

Flowmeter Regulator



SMITH'S EXCLUSIVE SELF-CENTERING BALL FLOW TUBE

Smith's exclusive ball-centering flow tube provides accurate flow readings even if the tube is tipped. This ensures good weld quality and gas savings.



OTHERS

Non self-centering flow tube ball tends to float off center. Actual gas flow can be up to 2-1/2 times greater than is indicated.

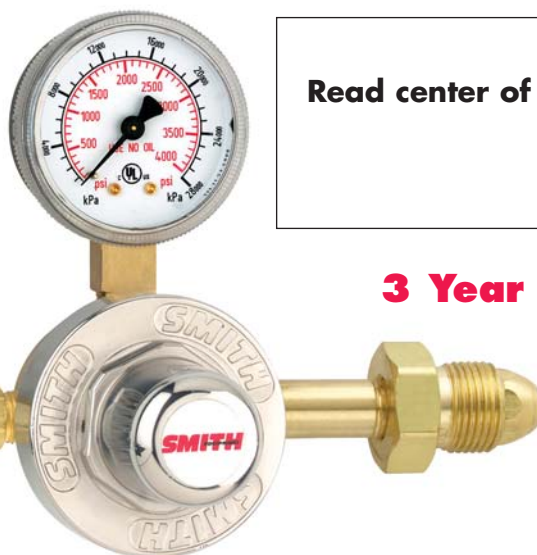
FEATURE BENEFITS

- 1 Unique Self-Centering Ball Guide**
Exclusive self-centering design retains ball in the center of gas flow for accuracy and savings.
- 2 Extra Long Flow Tube**
Expanded scales are easy to read and accurate within 3% of full reading. Can be attached to regulators or pipeline installations.
- 3 Protective Housing**
Flow tubes are protected from accidental damage on three sides while offering unobstructed view of flow reading.
- 4 Single Stage Flowmeter Regulators**
Provides unmatched performance in their class for efficient and accurate regulation. Series 30™ is equipped with Lexan™ shatter resistant flow tubes.
- 5 Scale Selection**
Various scales available for a variety of applications.
- 6 Selec-O-Gas™ Flowmeter Regulators**
Four separate, easy-to-read scales for Argon, CO₂, Helium and General use. The general scale can be used for most non-corrosive gases.
- 7 Pressure Relief Valve**
Protects flowmeter from damage due to inlet pressure surges and protects regulator diaphragm from bursting.

Regulators
Flowmeters



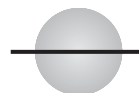
SERIES 30™ FLOWMETER REGULATOR



100% TESTED AND INSPECTED

NOTE:

Read center of ball on all Smith Flowmeters



3 Year Limited Warranty

Flowmeter Regulators

SERIES 30™ PREMIUM SINGLE STAGE FLOWMETER REGULATORS

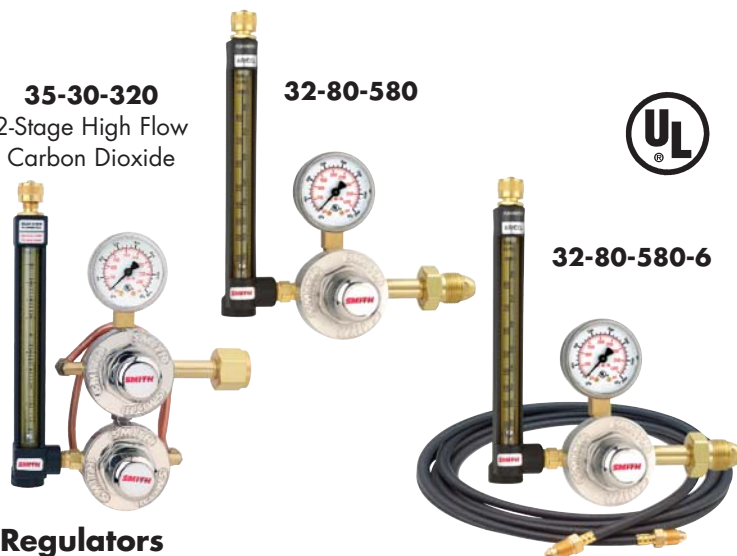
Rugged medium duty industrial grade regulators provide efficient and accurate regulation, also includes self-centering flowball. Has many features found in more expensive flowmeter regulators. Contains Smith's exclusive Sure Seat™ filtered seat technology for extended seat and regulator life. Filtered seat prevents contamination from entering the seating area reducing repair costs and down-time. Filtered seat also reduces CO₂ freeze-up. Regulators are manufactured with a rugged forged body with bright nickel-plated bonnet. Backed by a 3 year limited warranty.

35-30-320
2-Stage High Flow
Carbon Dioxide

32-80-580



32-80-580-6



Series 30™ Single Stage Flowmeter Regulators

Regulators
Flowmeters

Stock No.	Gas Used	Flow Range	Preset Delivery Pressure	Flowmeter	Inlet Connection	Outlet Connection	Maximum Inlet Pressure
32-80-580	Argon/CO ₂	0-80 SCFH	80 PSIG	H1105	CGA 580	5/8" - 18 RH	3000 PSIG
32-80-320	CO ₂	0-38 LPM	6 Bar		CGA 320	Internal	207 Bar
32-30-580 Selec-O-Gas™	Argon/CO ₂	0-60 SCFH 0-28 LPM	30 PSIG 2 Bar	H1240	CGA 580		
	Helium	0-190 SCFH 0-90 LPM					
	General/ Any Gas	0-10 Range Scale					
35-30-320	CO ₂	0-80 SCFH 0-38 LPM			CGA 320		

Flow Data & Cross Reference
to old model numbers
available on Smith Website
under Tech & Safety Info.
smithequipment.com

NOTE: Add (-6) to end of part number to include 6' X 1/4" Inert gas hose.

* **SELEC-O-GAS™** Regulator Does the jobs of more than 3 common flowmeters.

Has 3 separate scales: ARGON/CO₂, HELIUM & GENERAL GAS.

3 Year Limited Warranty

H2051 SINGLE STAGE FLOWMETER REGULATOR

Exceptional value and compact design, provides precise shield gas regulation for MIG and TIG welding applications and more. Shatter resistant polycarbonate flow tube features triple scale for Argon, Helium and Argon/CO₂ and has a packless O-ring flow tube seal which reduces maintenance. Built-in rupture disc reduces possibility of flow tube damage due to high pressure inlet surge. Precision flow adjustment valve locks flow at desired setting.



H2051A-580

H2051A-580H

Stock No.	Gas Used	Flow Range	Preset Delivery Pressure	Inlet Connection	Outlet Connection	Maximum Inlet Pressure
H2051A-580	Argon, CO ₂ Helium	0-50 SCFH 0-24 LPM	50 PSIG 3 Bar	CGA 580	5/8" - 18 RH Internal	3000 PSIG
*H2051A-580H	Argon/CO ₂ Mix					

* Includes 6' (1.8m) hose with inert hose connections.

3 Year Limited Warranty



Series 30™ Dual Flowmeter Regulator



33-50-580

FEATURE BENEFITS

- Dual Scale Calibration
- Preset at 50 PSIG
- Back Pressure Compensated Flow Tube
- Sensitive Needle Valve for Fine Adjustment
- Durable Lexan™ Flow Tube Cover
- Large 2" (51mm) Cylinder Contents Gauge
- Dual Scale

3 Year Limited Warranty



Stock No.	Gas Used	Flow Range	Flowmeter	Inlet Connection	Outlet Connection
33-50-580 Dual Scale	Argon, CO ₂	0-50 SCFH 0-28 LPM	H2230	CGA 580	5/8" - 18 RH
	Helium	0-160 SCFH 0-75 LPM			Internal

Liquid Cylinder Regulators - Rear Entry



254-20-02

Due to order specific configurations, Smith Equipment can not accept returns of 250 Series regulators.

FEATURE BENEFITS

- Easy to read single scale 2-1/2" gauge
- Ideal for non-corrosive high purity applications
- Nickel plated brass body and bonnet for corrosion resistance
- Large 2-1/8" SST diaphragm for precise control of pressure
- Easy to adjust hand knob
- Two year limited warranty

2 Year Limited Warranty

Regulators
Flowmeters

252 - 20 - 08

OPTION 1: MODEL SERIES AND OUTLET PRESSURE

252	100 PSIG
254	200 PSIG
255	350 PSIG
256	500 PSIG

OPTION 2: OUTLET FITTINGS

00	1/4" FNPT
20	Chrome Needle Valve with male 1/4" NPT outlet
82	9/16" - 18 RH "B" Fitting

OPTION 3: CGA INLET FITTINGS

00	1/4" FNPT
02	CGA 320
08	CGA 540
09	CGA 580

ORDERING INFORMATION FOR 250 SERIES REGULATORS

Product Number	Max. Inlet Pressure (PSIG)	Max. Outlet Pressure (PSIG)	Delivery Gauge	
			Range (PSIG)	Graduations (PSIG)
252	3,000	100	0-200	5
254	3,000	200	0-400	10
255	3,000	350	0-400	10
256	3,000	500	0-1,000	20

REGULATORS FOR DISPOSABLE CYLINDERS

Attaches to 14.1 oz. and 16 oz. disposable tanks.



Stock No.	Outlet PSIG Pressure	Gas
249-499	4-8	Oxygen
249-500	16-18	LP, MAPP®, Propylene

1 Year Limited Warranty

Fits "B" 9/16" hoses

Safety • Performance • Durability

Flowmeters



Flowmeter assemblies are designed to operate at an inlet pressure of 30 PSIG (except H1105 which is designed to operate at an inlet pressure of 80 PSIG). They may be attached to regulators or pipeline installations. All flowmeters have 1/4" (6mm) NPT female inlets.

FEATURE BENEFITS

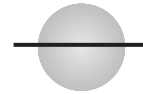
- 1 Flow tube is extra long and is accurate to within 3% of the full scale reading. Tubes are made of shatter resistant Lexan™.
- 2 Flow tube has a unique ball guide which centers the ball in the tube and keeps it centered. A ball floating in a non-centering tube allows the ball to float off-center and will result in greater flows than the reading indicates.

Selec-O-Gas™ Flow Tube - Just rotate the outer tube to the scale you desire for:

- Argon • CO₂ • Helium • General/Any Gas

Shatter resistant Lexan™ tube

NOTE: Read center of ball on all Smith Flowmeters



Regulators
Flowmeters

HEAVY DUTY FLOWMETERS

Stock No.	Gas Used	Flow Range	Tube No.	Inlet Connection	Outlet Connection	Recommended Inlet Pressure
*H1105	Argon/CO ₂	0-80 SCFH	13220	1/4" NPT	5/8" - 18 RH	80 PSIG
*H1240 Selec-O-Gas™	Argon/CO ₂ Helium, General	Various	14254	Male	Internal	30 PSIG

* H1105 supercedes H1103; H1240 supercedes H1230E.

STANDARD DUTY FLOWMETER

Stock No.	Gas Used	Flow Range	Tube No.	Inlet Connection	Outlet Connection	Recommended Inlet Pressure
H2230 Econ. Multi-Scale	Argon, CO ₂ Helium,	Various	N/A	1/4" NPT Male	5/8" - 18 RH Internal	50 PSIG
H2231 Econ. Multi-Scale	Argon/CO ₂ Mix			5/8" - 18 RH External		

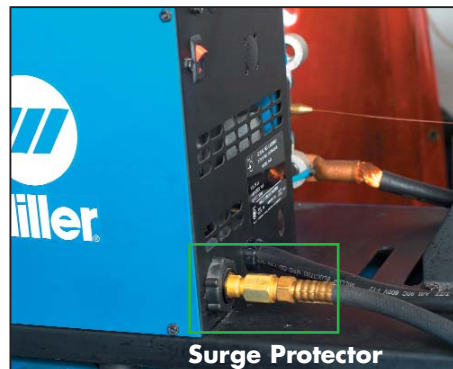
CAUTION: Do Not Connect Flowmeters Directly to Gas Cylinder.

NOTE: When using Argon/CO₂ mix, read Argon scale.

1 Year Limited Warranty

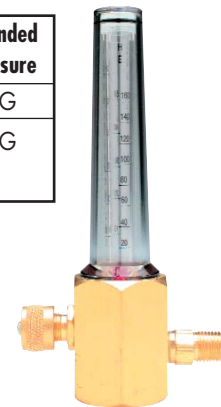
SURGE PROTECTORS - 15001 Series

Fixed flow surge protectors designed for MIG welding applications, eliminates sudden rush of shield gas sometimes caused by accumulator effect of MIG welding system components. Flows listed are at 30 PSI inlet pressure. Female thread size 5/8" (16mm) - 18 UNF, male thread size 5/8" (16mm) - 18 UNF (connects directly to wire feeder or welder).



Surge Protector

Stock No.	CO ₂	Air	Argon	Helium	Nitrogen	Hydrogen	Oxygen	Orifice Diameter
15001-20	20	24	21	65	25	91	23	.026
15001-30	30	37	32	100	38	140	35	.032
15001-40	39	48	41	129	49	182	46	.037



H2230



H2231



15001-30

Series 30™ Single Stage Flow Gauges



31-50-580



31-50-580-6

**3 Year
Limited Warranty**

FEATURE BENEFITS

- Compact Design
- Machined Brass Body
- Neoprene/Nylon Diaphragm
- 2" (51mm) Diameter Gauges
- Protective Inlet Filter - Sure-Seal™
- Self Re-Seating Pressure Relief Valve
- 0 - 4000 Inlet Gauge
- 10 - 50 SCFH Delivery Gauge

Stock No.	Gas Used	Flow Range	Inlet Connection	Outlet Connection
31-50-580	Argon	10-50 SCFH	CGA 580	5/8" - 18RH Internal
31-50-580-6*		0-50 SCFH	CGA 320	
31-50-320	CO ₂	0-50 SCFH	CGA 320	

NOTE: Out orifice diameter .032"

* Includes 6' (1.8m) hose with inert hose connections.

FIXED FLOW ADAPTORS - H1400 Series

Designed for welding operations or other applications requiring fixed gas flows. Installs in regulator outlet or directly on 30 PSIG pipeline outlet without regulator. Set regulator at 30 PSIG and be assured of correct gas flow. Inlet filter protects orifice from debris. F.M. thread size 5/8" (16mm) - 18 U.N.F. Male thread size 1/4" NPT (6mm).

Stock No.	Flow SCFH (30 PSIG Inlet)							Orifice Diameter
	CO ₂	Air	Argon	Helium	Nitrogen	Hydrogen	Oxygen	
H1400-20	20	24	21	65	25	91	23	.026
H1400-30	30	37	32	100	38	140	35	.032
H1400-40	39	48	41	129	49	182	46	.037
H1400-50	50.5	62	53	167	63	234	59	.042



H1400-20

Regulator Warranty Information

3 - Year Limited Regulator Warranty:

Smith Equipment warrants to the purchaser, all Smith Equipment Gas Regulators against defects in materials and workmanship (parts and labor) for a period of three years. All metallic regulator components are warranted for a period of three years (parts only).

NOTE: Disposable cylinder regulators are warranted for a period of one (1) year.

The warranty period is established by the manufacturer's date code which is imprinted on the product or date of purchase if proof of purchase date is provided by the purchaser with the warranty claim. Smith Equipment makes no other warranty of any kind, expressed or implied, including without limitation no warranty of merchantability or fitness for any purpose. During the warranty period, Smith Equipment agrees, at its option, to repair, replace or refund the purchase price of any product found defective upon inspection by Smith Equipment. This is the sole and exclusive remedy of the purchaser and the sole and exclusive liability of Smith Equipment, whether in

contract, in tort, under any warranty, in negligence or otherwise. Smith Equipment shall not be liable under any circumstances for any incidental, consequential, special, indirect or other damages, or for loss of use, revenue or profit even if Smith Equipment has been advised of the possibility of such damages. The warranty and remedies provided herein shall not apply if a product is damaged by accident, abuse or misuse, if a product is modified in any way except by personnel authorized by Smith Equipment, or if anything except genuine Smith Equipment replacement parts, tips, and consumables are used with the equipment.

Safety • Performance • Durability

Premium Quality Pressure Gauges

Smith Equipment Replacement Pressure Gauges are manufactured in accordance with Smith's rigid quality standards. All gauges feature precision watch type movements for optimum accuracy. Gauges are supplied in convenient "Slider-Pak" packaging for attractive display, allows removal and inspection of product without damage to packaging.

FEATURE BENEFITS

- 2" (51mm) and 2-1/2" (64mm) Gauges U.L. Listed.
- Watch-type precision movement for optimum accuracy.
- One-piece polycarbonate crystal is shatter resistant and has protective lip to prevent damage to face.
- Preferred design with 1/4 turn crystal ring.
- High visibility cupped steel face.
- PSI/Bar pressure gauges and CFH/LPM flowgauges



2" Gauge
(51mm)
Part No. GA134-03



2-1/2" Brass Gauge
(64mm)
Part No. GA033-07

Gauges

2" (51mm) Black Case Gauges

Part No.	Description	Pressure Calibration
GA136-03	CFH / LPM	50 CFH / 25 LPM
GA134-03	PSI / BAR (Red Zone)	30 PSI / 2 Bar
GA141-03	PSI / BAR	30 PSI / 2 Bar
GA135-03	PSI / BAR	60 PSI / 4 Bar
GA143-03	PSI / BAR	100 PSI / 7 Bar
GA137-03	PSI / BAR	150 PSI / 10 Bar
GA140-03	PSI / BAR	200 PSI / 14 Bar
GA138-03	PSI / BAR	400 PSI / 28 Bar
GA142-03	PSI / BAR	600 PSI / 40 Bar
GA139-03	PSI / BAR	4000 PSI / 280 Bar
GA145-03	PSI / BAR	6000 PSI / 400 Bar

NOTE: All 2" (51mm) gauges have 1/4" (6mm) NPT bottom stem.

2-1/2" (64mm) Brass Case Gauges

Part No.	Description	Pressure Calibration
GA026-07	PSI / BAR (Red Zone)	30 PSI / 2 Bar
GA029-07	PSI / BAR	60 PSI / 4 Bar
GA033-07	PSI / BAR	200 PSI / 14 Bar
GA037-07	PSI / BAR	400 PSI / 28 Bar
GA043-07	PSI / BAR	4000 PSI / 280 Bar

NOTE: All 2-1/2" (64mm) gauges have 1/4" (6mm) NPT bottom stem.

Proportional Gas Mixers Typical Applications

- Weld and purge with a variety of gases
- Accurate TIG and MIG weld shielding
- Mixed gases for the foundry industry
- Accurate mixing of gases for the aerospace industry
- Laboratory applications
- Gas mixtures for plasma arc cutting machines
- Controlling the atmosphere in heat treat ovens
- Mixtures are maintained with any selection
- Mixture accuracy is unaffected when inlet pressure remains within specified limits
- Reduced set-up time eliminates the need for premixed gases
- Easy operation, training and supervision
- **Requires no electricity**

Eliminates stocking and handling premixed gases

Various welding jobs require different mixes for the best performance. On-site mixing of gases with Smith's proportional gas mixers eliminates inventorying and handling of costly premixed gases. Individual gases can be mixed for specific welding or other industrial requirements resulting in improved performance. Controlling the mixture of gases will result in lower cost and better controlled welds.

Reduces Set-up Time

No need to change cylinders, regulators, flowmeters or hoses when changing from one range of mixed gas to another. Just turn the dial for whatever mixture you need. No critical adjustment of flowmeters or complex calculations needed to achieve proper mixture rates.

Accurate — No Gas Separation!

Premixed gases may separate (stratify) into the individual gases within the cylinder. Smith's proportional gas mixer eliminates gas stratification to always gives you an accurate mixture.

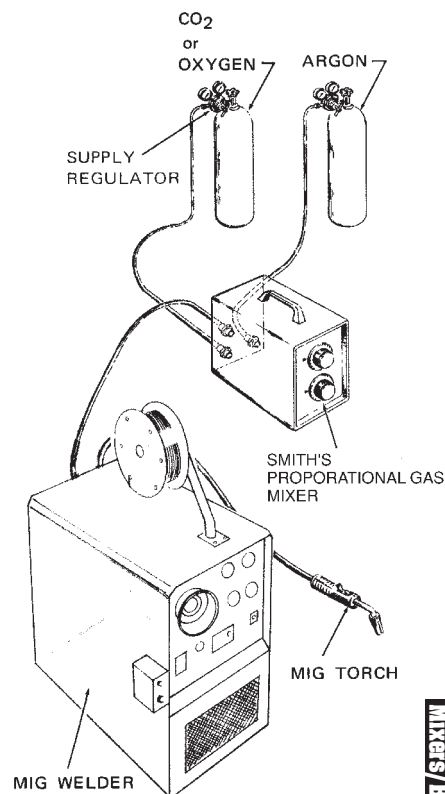
Easy Operation, Training & Supervision in Welding Applications

Whether you are using a single welder or a manifold system supplying many welders, operation is simple and easy to use. Ideal for training all personnel regarding shielded gas mixtures because they can see the effect of various gas mixtures on weld appearance, quality and penetration. Supervisors can easily note at a glance if the operator is using specified gas mixture.

Three Series of Mixers Available:

2-Gas Mixers in Standard and High Capacity Models and 3-Gas Standard Models

The standard 2-gas series provides flows up to 180 SCFH and is suitable for most applications. The high capacity two-gas series provides flows up to 700 SCFH and is designed primarily for large manifold systems with station flowmeters in the welding industry. It is ideal for other industrial applications requiring high flow rates. The standard three-gas series provides flows up to 180 SCFH.



Gas
Mixers/Blenders



2 Gas
10-180 SCFH/5-85 LPM



2 Gas
20-700 SCFH/9-330 LPM



3 Gas
10-180 SCFH/5-85 LPM

Safety • Performance • Durability

Proportional Standard 2-Gas Mixers



**Standard Two Gas Mixer
180 SCFH/85 LPM**

STANDARD 2-GAS MIXER - 180 SCFH/85 LPM

Stock No.	Gases	Adjustment % Range	Required Inlet Pressure/ Gas PSIG/Bar	Outlet Pressure Without Flow PSIG/Bar*
299-006-1B	Argon CO ₂	0-100% 100-0%	105 - 115 7.3 - 7.9	50 / 3.5
299-006-3B	Argon Helium	0-100% 100-0%	105 - 115 7.3 - 7.9	50 / 3.5
299-011-1B Dual Scale	Argon Hydrogen	50-100% 50-0%	105 - 115 7.3 - 7.9	50 / 3.5
	Argon Oxygen	80-100% 20-0%		
299-027B	CO ₂ Oxygen	0-100% 100-0%	105 - 115 7.3 - 7.9	50 / 3.5

All gases used with the mixers must be compatible with Buna-N, Copolymer Acetal, Nylon and Polyethylene.

* **NOTE:** outlet pressure, factory set at no flow.



Series 30™ Mixer Inlet Regulators

30-150-580 - Nitrogen
30-100-320 - CO₂
30-100-350 - Hydrogen
30-100-540 - Oxygen

NOTE: Series 30™ regulators will supply necessary pressures for mixer operation.

SPECIFICATIONS	
Flow Rate	10-180 SCFH 4.8-85.7 LPM
Flow Rate Subdivisions	10 SCFH 4.8 LPM
Inlet & Outlet Connections	5/8"-18 RH Internal
Inlet Filters, Mixer protection only	60 Micron Nominal PN: 3291
Case Material	304 Stainless Steel
Weight	8 lbs. / 3.5kg
Size (WxDxH)	5-1/4" x 10" x 6-1/4" (133mm x 254mm x 165mm)

Replacement Mixer

Inlet Filters: Part # 3291

NOTE:

Mixers and blenders may be shipped to Smith Equipment for recalibration, reconditioning and gas mix certification.

Contact Smith customer service via email at smith@smithequipment.com to obtain information on costs and return goods instructions.

High Capacity 2-Gas Mixers



**High Capacity Two Gas Mixer
700 SCFH/330 LPM**

**Replacement Mixer
Inlet Filters: Part # 8203**

HIGH CAPACITY 2-GAS MIXER - 700 SCFH/330 LPM

SPECIFICATIONS

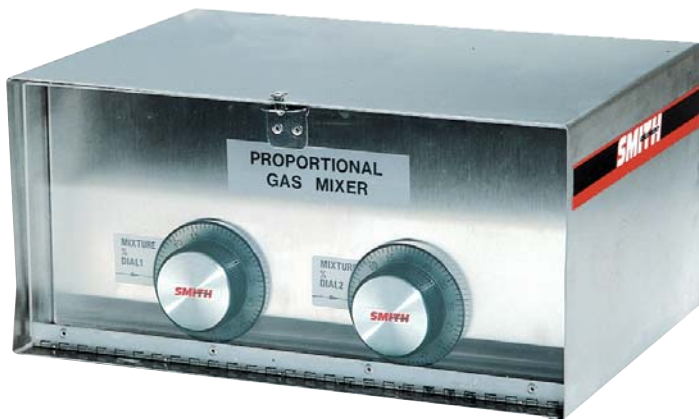
Flow Rate	20-700 SCFH / 9.4-330 LPM
Inlet Connection	1/4" FNPT
Outlet Connection	1/2" FNPT
Inlet Filters, mixer protection only PN: 8203	60 Micron Nominal
Case Material	304 Stainless steel
Weight	17 lbs. - 7.5kg
Size (WxDxH)	14" x 11" x 7" (356mm x 279mm x 179mm)

HIGH CAPACITY 2-GAS MIXERS - 700 SCFH/330 LPM

Stock No.	Gases	Adjustment % Range	Required Inlet Pressure/ Gas PSIG/Bar	Outlet Pressure Without Flow PSIG/Bar*
299-016-1B	Argon CO ₂	0-100% 100-0%	105 - 115 7.3 - 7.9	50 / 3.45
299-016-16B Dual Scale	Argon Hydrogen	50-100% 50-0%	105 - 115 7.3 - 7.9	50 / 3.45
	Argon Oxygen	80-100% 20-0%		

* Factory Set At No Flow.

Standard 3-Gas Mixers



Three Gas Mixer - 180 SCFH/85 LPM

SPECIFICATIONS	
Flow Rate	10-180 SCFH / 4.7-85.7 LPM
Inlet & Outlet Connections	5/8"-18 RH Internal
Inlet Filters, Mixer protection only PN: 3291	60 Micron Nominal
Case Material	304 Stainless Steel
Weight	17 lbs. - 7.5kg
Size (WxDxH)	14" x 11" x 7" (356mm x 279mm x 179mm)

STANDARD 3-GAS MIXERS - 180 SCFH/85 LPM

Stock No.	Gases	Adjustment % Range	Required Inlet Pressure/ Gas PSIG/Bar	Outlet Pressure Without Flow PSIG/Bar*
299-039B	Argon Oxygen CO ₂	85-100% 0-15% 0-15%	105-115 7.3-7.9	50 / 3.45
299-042B	Argon Helium Oxygen	50-100% 0-50% 0-15%	105-115 7.3-7.9	50 / 3.45

* Factory Set At No Flow

Gas
Mixers/Blenders

Safety • Performance • Durability

Gas Blenders

Proportional

PROPORTIONAL GAS BLENDERS

For Controlled and Modified
Atmospheric Packaging of Food Products

FEATURE BENEFITS

- Select from a variety of gas percentages to meet your packaging needs
- Mixtures are maintained with any selected proportion with no gas separation
- Mixture accuracy is unaffected when inlet pressure remains within specified limits
- Reduced set-up time eliminates the need for premixed gases
- Ideal for mixture development for food packaging
- Laboratory and research applications
- Easy to operate

Eliminates The Need For Premixed Gases

Blending of gases eliminates the percent variations found with premixed gases. Lower cost individual gases can be blended to specific percentages for the product being packaged. Controlling the blended gases will result in lower cost and more flexibility in your packaging process.

Reduced Set-Up Time

On-site blending of gases eliminates the need to change cylinders, regulators, flowmeters, and hoses when changing from one mixture percentage to another. Changing the percentage setting is accomplished by the simple movement of a dial.

Eliminates Gas Separation

Blending of gas just prior to use eliminates gas stratification or separation that can occur when pre-mixed cylinders are allowed to stand for periods of time before use.

Automatic Shutdown

If any one of the incoming gases falls below a certain pressure level the Blender will automatically shut down. This eliminates the possibility of operating with only one gas.

Easy Installation and Operation

Smith's Gas Blender require no electrical connections. It is a completely mechanical device that is adjusted by simply turning a dial. This makes quick and easy percent mixture changes possible.

Tamper Resistant

Smith Blenders have a transparent Lexan™ door to protect the dial from accidental movement. This also allows the operator to monitor the setting.

NOTE: The pictures in this catalog depict examples of food products that may be packaged using the CAP/MAP process. Not all of the food products shown were packaged using these processes or the Smith blender.



Two Gas Blender - 700 SCFH

Proportional - 2-Gas Blender - 700 SCFH/330 LPM

SPECIFICATIONS		
Inlet Pressure	Minimum 105 PSIG	7.23 Bar
	Maximum 115 PSIG	7.92 Bar
Outlet Pressure, Factory Set At No Flow	80 PSIG	5.5 Bar
Flow Rate	20-700 SCFH	9.4-330 LPM
Inlet Connection	1/4" NPT	
Outlet Connection	1/2" NPT	
Inlet Filters, Blender Protection Only PN: 8203	60 Micron Nominal	
Case Material	304 Stainless Steel	
Weight	17 lbs. / 7.5kg	
Size (W x D x H)	14" x 11" x 7" (356mm x 279mm x 179mm)	

TWO GAS BLENDER WITH AUTOMATIC SHUTDOWN

700 SCFH/330 LPM

Stock No.	Gases	Adjustment %Range	Required Inlet Pressure/ Gas	Outlet Pressure Without Flow
299-029F	Nitrogen CO ₂	0-100% 100-0%	105 to 115 PSIG 7.3 - 7.9 Bar	80 PSIG 5.5 Bar



**Two Gas Blender
700 SCFH/330 LPM**

With Automatic Shutdown Feature

Proportional - 3-Gas Blenders - 180 SCFH/85 LPM

SPECIFICATIONS		
Inlet Pressure	Minimum 105 PSIG	7.23 Bar
	Maximum 115 PSIG	7.92 Bar
Outlet Pressure, Factory Set At No Flow	50 PSIG	3.45 Bar
Flow Rate	10-180 SCFH	4.8-85.7 LPM
Inlet and Outlet Connections	3/8" NPT RH Internal	
Inlet Filters, Blender Protection Only PN: 3291	60 Micron Nominal	
Case Material	304 Stainless Steel	
Weight	17 lbs. / 7.5kg	
Size (W x D x H)	14" x 11" x 7" (356mm x 279mm x 179mm)	

THREE GAS BLENDERS WITH AUTOMATIC SHUTDOWN

180 SCFH/85 LPM

Stock No.	Gases	Adjustment %Range	Required Inlet Pressure/ Gas	Outlet Pressure Without Flow
299-037F	Nitrogen Oxygen CO ₂	0-100% 100-0% 100-0%	105 to 115 PSIG 7.3 - 7.9 Bar	50 PSIG 3.45 Bar



**Three Gas Blender
180 SCFH/85 LPM**

With Automatic Shutdown Feature

Gas
Mixers/
Blenders



Safety • Performance • Durability



Twin Hoses for Acetylene & Oxygen

IMPORTANT NOTE: Grade "R" welding hose is for use with acetylene only as specified by the RMA-CGA Hose Standard. "T" Grade hose must be used with all other gases.

WARNING: Do not exceed the maximum working pressures (regulator setting) listed for the hoses during welding and cutting operations.

Oxygen	150 PSIG Maximum
Acetylene	15 PSIG Maximum
Propane, Propylene & all other Fuel Gases	40 PSIG Maximum



In-Service Caution: The user is first cautioned to shut off the gases at the torch and then at the regulators or supply source when the torch will not be used for periods in excess of 30 minutes in order to limit permeation of gas through the hose wall.

TWO-IN-ONE "R" GRADE HOSE FOR ACETYLENE ONLY

Oxygen-Green

Acetylene-Red

Stock No.	Length	Diameter	Weight (lbs. & kg)	Connections		Use With Torch Series	I.D. Size
				To Regulators	To Torches		
RL1131	25 ft. (7.6m)	1/4" (6mm)	6-1/2 (2.9kg)	R11 (Oxygen) R12 (Fuel) 9/16"-18 ("B")	R11 (Oxygen) R12 (Fuel) 9/16"-18 ("B")	DG, SC, SW	 1/4" (6mm)
RL921	12-1/2 ft. (3.8m)	3/16" (5mm)	2-3/4 (1.2kg)	R13D (Oxygen) R14D (Fuel) 9/16"-18 ("B")	R13D (Oxygen) R14D (Fuel) 9/16"-18 ("B")	DG, MW, CW	 3/16" (5mm)
RL935	20 ft. (6.1m)	3/16" (5mm)	4 (1.8kg)				
RA921	12-1/2 ft. (3.8m)	3/16" (5mm)	2-1/2 (1.1kg)	R13D (Oxygen) R14D (Fuel) 9/16"-18 ("B")	R13 (Oxygen) R14 (Fuel) 3/8"-24 ("A")	AW	

R-GRADE

Hoses

TWO-IN-ONE "T" GRADE HOSE FOR USE WITH FUEL GASES (LP OR ACETYLENE GAS)

Oxygen-Green

LP/Acetylene-Red

Stock No.	Length	Diameter	Weight (lbs. & kg)	Connections		Use With Torch Series	I.D. Size
				To Regulators	To Torches		
TRL1131	25 ft. (7.6m)	1/4" (6mm)	6-1/2 (2.9kg)	R11 (Oxygen) R12 (Fuel) 9/16"-18 ("B")	R11 (Oxygen) R12 (Fuel) 9/16"-18 ("B")	DG, SC, SW	 1/4" (6mm)


T-GRADE



Single Hoses For Acetylene

IMPORTANT NOTE: The Grade "R" hose is for use with acetylene only as specified by the RMA-CGA Hose Standard. "T" Grade hose must be used with all other gases.

SINGLE "R" GRADE HOSES FOR ACETYLENE ONLY - Red Hose

Stock No.	Length	Diameter	Weight (lbs.)	Connections	Use With Torches	I.D. Size
RL121	12-1/2 ft. (3.8m)	3/16" (5mm)	1-1/4 (.55kg)	9/16"-18 LH ("B")	NE180 Handi-Heet	 3/16" (5mm)

R-GRADE

Single Hoses


SINGLE HOSE - Inert Gas - Black Hose

Stock No.	Use For	Length	Diameter	Connections	INERT
7294-1	Inert Gas	6 ft. (1.8m)	1/4" (6mm)	5/8"-18 RH Male	

7294-1

SINGLE HOSE FOR NITROGEN

Heavy Duty Charging Hose for use with Nitrogen for HVAC Purging Applications

Stock No.	Length	Connections		Use With Regulators	I.D. Size
		to Regulator	to A/C Unit		
RL260	6 ft. (1.8m)	7/16"-20 RH Internal	7/16"-20 RH w/core	30-450-580 depress to open Schraeder Valve	 1/4" (6mm)

INERT

RL260

LITTLE TORCH™ REPLACEMENT HOSES

Stock No.	Length	Hose Type
13254-1-8	8'	Oxygen
13254-3-8	8'	Any Fuel
13254-4-8	8'	Oxygen/Fuel

NOTE: "B" - 9/16" Hose Fittings.
Replacement hoses Include Installation tool 7799 and Ferrule 7582.

QUICKBRAZE™ REPLACEMENT HOSES

Stock No.	Length	Hose Type	Hose Fittings
14777-4-10	10'	Oxygen/Fuel	"A"- 3/8"
14778-4-10	10'	Oxygen/Fuel	"B"- 9/16"

NOTE: "A" & "B" - 9/16" Hose Fittings.
Replacement hoses Include Installation tool 7799 and Ferrule 7582.

Kevlar® Brazing Hose

14779-4-10

"A" & "B" Fitting Twin Hose
3/8" and 9/16"
Female Connections

Kevlar® Hose Features & Benefits

Extremely durable, heat resistant, light weight and flexible.
Excellent for repetitious brazing operations.
(Not recommended for use with cutting attachment.)

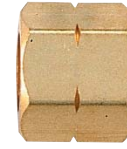
NOTE: For AW1A Handle only.

Hoses

Hose Fittings

LITTLE TORCH™ HOSE NUTS

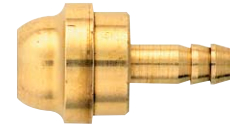
Stock No.	Type	Nut Thread & Number	Hose ID Size
R2	Oxygen	9/16"-18 RH	1/8" (3mm)
R3	Fuel Gas	9/16"-18 LH	1/8" (3mm)



R3

LITTLE TORCH™ HOSE TAILPIECE

Stock No.	Type	Style	Hose ID Size
1882	Oxygen/Fuel	Barbed	1/8" (3mm)

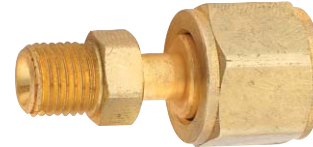


1882

NOTE: For Oxy and Fuel Connections.

HOSE ADAPTORS ("B" REGULATOR FITTING TO "A" HOSE FITTING)

Stock No.	Type	Male Thread	Female Thread
14389 (B to A)	Oxygen	3/8"-24 RH	9/16"-18 RH
14390 (B to A)	Fuel Gas	3/8"-24 LH	9/16"-18 RH



14389

LITTLE TORCH™ & QUICKBRAZE™ HOSE FERRULE

Stock No.	Inside Diameter	Length	Hose Type
7582	3/16"/5mm	9/32"/7mm	Oxygen/Fuel

NOTE: 7799 - Crimping tool to crimp ferrule on Little Torch™ hose.



**Ferrule
7582**



**7799
Crimping
Tool**

Hoses

TORCH HOSE CONNECTIONS

Stock No.	Type	Nut Thread & Number	Style
3060-1	Oxygen	9/16"-18 RH	Nickel Plated
3060-2	Fuel	9/16"-18 LH	

USE WITH: All heavy duty torch handles and hand torches.

3060-1



3060-2



15775 Sintered Filter

Sintered filter to prevent debris from entering torch. Installs inside Smith "B" torch inlet connections.

NOTE: Not for use with Gas Axe torches



**15584
Mesh Filter**

Mesh filter for use with WH200 Handles



Flashback Arrestors

FEATURES & BENEFITS:

- Built-in check valve prevents the reverse flow of gas
- Requires no manual reset
- Easy to install - attaches to standard "B" fittings
- High quality brass construction, case is rugged and corrosion resistant
- Sintered stainless steel filter stops flashback fire
- UL Listed

Frequently asked questions about flashback arrestors:

What is a flashback?

A flashback is an ignition of mixed gases in an oxy-fuel cutting and welding system.

Are flashback arrestors and check valves the same?

No. A check valve stops the reverse flow of gas; a flashback arrestor is designed to help stop the advancement of a flashback fire. Smith's flashback arrestor with built-in check valve does both.

Why do I need a flashback arrestor?

Mixed gas explosions and flashback fires can result in damage to equipment and/or severe personal injury or death. Smith flashback arrestors with built-in check valves help prevent accidents caused by the reverse flow of gases and flashback fires.

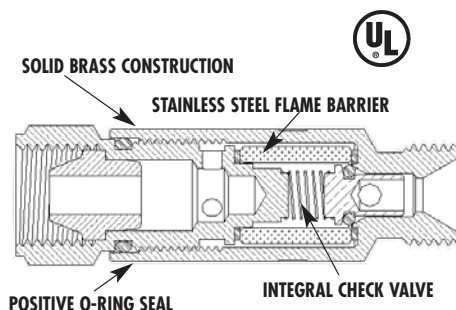
What is the minimum pressure required to allow gas to flow through the flashback arrestors?

The built-in check valve requires a minimum of 2 psi to open allowing gas to flow through.

NOTE: Smith Equipment cannot accept return of check valves or flashback arrestors as return shipping may compromise their performance capabilities.



H753



May Be Used With: Acetylene, propane, propylene, hydrogen and natural gas.

REGULATOR MOUNT For use with CGA "B" male fitting.

Stock No.	Gas
H753	Oxygen & Fuel Gas Pair

TORCH MOUNT (HIGH FLOW)

Stock No.	Gas
H743	Oxygen & Fuel Gas Pair

PRESSURE SETTINGS

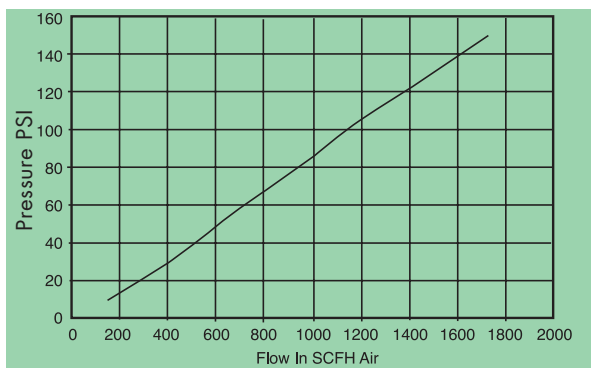
CAUTION: Flashback arrestors will contribute to significant pressure drop in a system, causing reduced flow. Pressure increase may be required to maintain equivalent flow rates after installing flashback arrestors in an oxy-fuel system.

CAUTION: DO NOT exceed 15 PSIG with acetylene gas.

NOTE: Flashback Arrestors should be tested and inspected on a regular basis.

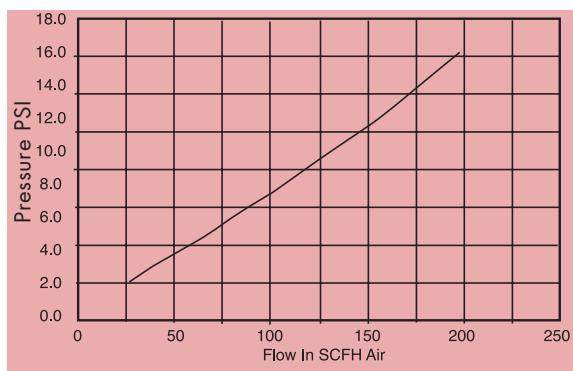
Oxygen Flow Capacity

Oxygen Flash Arrestors



Fuel Flow Capacity

Fuel Flash Arrestors



GASAVERTM - Save Money, Save Time & Improve Safety

Ideal for production brazing and welding applications, Smith's GASAVERS™ can help you realize huge savings by eliminating wasted gas during torch start-up / shut-down and between flame applications. Also saves time by eliminating repeated torch adjustment. The GASAVERTM gives you a safe place to temporarily put your torch and is used by America's largest production plants. Torch flame is automatically extinguished when torch is not in use. Simply pass torch over pilot flame to re-light.

WDW100

Standard GASAVERTM for use with propylene gas and oxygen. Equipped with pilot light.

WDW101

For general use on all types of acetylene and oxygen operations. GASAVERS™ can be installed in any convenient location on the line between regulators and torch. The closer the torch, the greater the savings in oxygen and acetylene. Equipped with pilot light.

WDW103

Equipped with separate pilot fuel inlet for use with low pressure gas with injector type torches. Separate source of high pressure pilot gas required. May also be used with hydrogen gas, however propane or natural gas is recommended to supply the pilot light.

WDW104

Standard GASAVERTM equipped with Pilot Light for use with propane or natural gas at 4 PSI or more.



- **UL Listed**
- **Made In USA**
- **1-Year Warranty**

NOTE: Contact factory for pilot options available for alternate fuels.



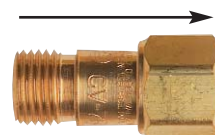
Reverse Flow Check Valves (NWSA 270)

Reverse flow check valves are an important part of any oxy/fuel system. Without check valves, reverse flow of oxygen and fuel gases can occur when a tip becomes clogged, or when one cylinder empties during use allowing the higher pressure gas to back up into the other hose and into the regulator, thereby creating conditions which could lead to a regulator explosion. Smith's reverse flow check valves close automatically when outlet pressures drop below 1/2 PSIG, preventing reverse flow of gases.

Gas Flow Direction



Regulator Connection Style
(Attach To Regulator Outlet Fitting)



Torch Connection Style
(Attach To Torch Handle)

REVERSE FLOW CHECK VALVES

Stock No.	Gas Used	Inlet Connection	Outlet Connection
Regulator Mount			
H698	Pair	9/16"-18 LH & RH Internal	9/16"-18 LH & RH External
Torch Mount			
H697	Pair	9/16"-18 LH & RH External	9/16"-18 LH & RH Internal

NOTE: Check valves should be replaced on a regular basis.

NOTE: Smith Equipment cannot accept return of check valves or flashback arrestors as return shipping may compromise their performance capabilities.

Smith Reverse Flow Check Valves, Available In 2 Styles

- H698 check valves attach directly to the existing regulator outlet fittings
- H697 check valves attach directly to torch handle



"O" RING REPLACEMENTS

Stock No.	Use with Welding/Heating Tips/Cutting Assemblies
AW15	AW Series Welding Tips / AT Series Heating Tips / AC309 Cutting Assembly / NE180 Series Air-Acetylene Tips
MW15	MW Series Welding Tips / MT Series Heating Tips / DG109A, MC509, MC505 & CC509P Cutting Assemblies
LW15	SW Series Welding Tips / ST Series Heating Tips / DG209, DG205, DG200, SC209, SC205, SC200 Cutting Assemblies

NOTE: 25 per package.

HAND CUTTING TORCH REPAIR KITS

Stock No.	Use with Torches
15772	DG900 & SC900 Series
SC100	DG100, 200 & 300 Series; SC100, 200 & 300 Series

CUTTING ASSEMBLY REPAIR KITS

Stock No.	Use with Cutting Assemblies
SC101	Heavy Duty DG200 & SC Series
MC101	Medium Duty DG100 & MC Series

THE LITTLE TORCH™ VALVE ASSEMBLY & PACKING REPLACEMENTS

Stock No.	
7345	Oxygen Valve Assembly
7346	Fuel Valve Assembly
7348	Teflon® Packing for Valve Assembly (for Oxy and Fuel Valves)

TORCH VALVE REPLACEMENTS

Stock No.	Use with Torch Handles & Hand Cutting Torches
LW17	WH100, MW5, MW5A, CW5A & AW10A
G729-5A	WH200, SW1A, SW1B Series, 780 Series Machine Torch
AW11A	AW1 & AW1A
LW14B-1	DG900, DG200, SC200, SC900 Series Hand Torches, 770 Series Machine Torches, SW1 Series Torch Handles

TORCH HEAD REPLACEMENT NUT

Stock No.	Use with Cutting Assemblies
G690-8	MC509, CC509P, AC309, MC505
G900-41A	Use with All SC Series Hand and Machine Torches & Cutting Torch Assemblies SC900 Series, SC772A, SC782A, SC781A, SC780A, SC771, SC770, SC509, SC300 Series Torches, SC200 Series Torches, SC100 Series Torches, SC200 Cutting Assembly
15555	Use with All Heavy Duty Dual Guard Hand Torch & Cutting Assemblies DG900 Series, DG209 Cutting Assembly, DG205 Cutting Assembly, DG300 Series, DG200 Series, DG100 Series
15720-1	Use with DG109A Cutting Assembly DG109A

Repair Parts



SC100



SC101



7345

7348

7346



**G729-5A
LW14B-1**

LW17

AW11A



**CUTTING TIP SEAT GRAFTITE®
PACKING REPLACEMENTS
(1 SET PER BAG)**

Part No.	
G691	"MC" Cutting Tips
G930	"SC" Cutting Tips



**TORCH HEAD
REPLACEMENT NUT
(TIP NUT)**

Hard Hat™ Regulator Guards



HB190



H195



H197

Protect regulators from costly gauge replacement with Smith's Hard Hat™ gauge guards. Promotes safety . . . designed to help prevent broken gauges which can lead to gas leaks. Time and cost savings . . . helps prevent costly equipment down time and expensive repairs.

HB190 Hard Hat™ is made from rugged steel. Bright yellow, baked enamel finish. Quickly and easily attaches to regulator. **Fits:** Series 40™, HB1500 and HB2100 series brass regulators.

H195 Hard Hat™ is formed from impact-resistant Lexan™ resin, an extremely tough, durable poly-carbonate. Bright safety yellow finish. **Fits:** Series 30™ and 1700 Series single stage regulators.

NOTE: Will not work with flow gauge regulators.

H197 Hard Hat™ is formed from impact-resistant Lexan™ resin, an extremely tough, durable poly-carbonate. Bright safety yellow finish. **Fits:** Series 30™ two stage regulators.

NOTE: H197 will not fit 1400 Series two stage regulators.

ACCESSORIES

Stock No.	Description
N230	Cylinder Wrench
N250	Tip Cleaners (Sharp Point Spirol)
N108ANB	Goggles
N113ANB	Flint Lighter (N113-3 Replacement Flints) (5 per pkg.)
NE135B	Two-Hose Manifold - Oxygen "B" Connections
NE136B	Two-Hose Manifold - Fuel "B" Connections
13493	Caddy Carrier w/Hose Wrap & Storage Compartment for MC Acetylene and 20 cu. ft. Oxygen cylinders.
16229	Circle Cutting Guide cuts from 5/8" to 12" diameter holes. Works with all SC and MC style cutting tips.



16229
Adjustable Circle Cutting Guide



N108ANB Goggles



N230 Cylinder Wrench



13493
Torch & Cylinder Carrier



N250 Tip Cleaners



N113ANB Lighter



NE135B
2-Hose Manifold



Safety Training Materials



SMITH SAFETY PACK

Order Form #5145 w/DVD

This kit includes:

- 30 - "37 Violations Safety Quiz" Brochures
- 30 - Safety Meeting Guides (in English, French & Spanish)
- 1 - 41 minute Oxy-Fuel Safety Video (see description and photos below)
- 1 Set Of 6 Smith Cartoon Safety Posters - 17-1/2" x 24" (see description and photos below)
- 1 Each post safety video test and answer key (may be duplicated)

Smith literature and safety training materials may be ordered directly online, visit www.smithequipment.com and use the "Lit. Request" link.

***NOTE:** Safety DVD in English, French and Spanish.

VM-6

Safety Video
6-Pack Counter
Display (DVD)



**Oxy-Fuel VHS
Safety Video
Form 4875**

**Oxy-Fuel
Safety DVD
CD Form 4911
DVD Form 5127**

OXY-FUEL SAFETY VIDEO

Don't take chances on safety! Learn safe cutting and welding practices with Smith Equipment's Oxy-Fuel Safety Video; also available on CD or VHS. This comprehensive 41-minute video takes you step-by-step through proper set-up and use of oxy-fuel cutting, welding, brazing and heating equipment. The video includes information on important procedures and equipment that can increase on-the-job safety. Ideal for schools, sales training, welder safety courses, refresher courses.

***NOTE:** Safety DVD in English, French and Spanish.



SMITH SAFETY POSTERS

These colorful, full-size posters carry important messages about oxy-fuel safety. Perfect for schools, showrooms, fabrication shops, repair centers, anywhere oxy-fuel equipment is used.

Form-4566

Set of six posters, each poster 17-1/2" x 24".

Form-5234

Six on one poster.



**Distributors:
Print Your
Logo Here**



Smith Equipment Vinyl Banner

Form No. 5236 Large Banner (24" x 72")

Form No. 5237 Small Banner (18" x 36")

This 2-color Smith Banner is perfect for indoor/outdoor displays. It has standard hems, ropes and grommets for sturdiness and easy hanging.



Counter Mat

Form No. 5269

Counter Mat dimension is 14" x 19".

(Adhesive backing)



Hanging Sign

Form No. 5297

Ceiling Sign dimension is 20" x 30" and includes drop ceiling mounting hooks and cord.

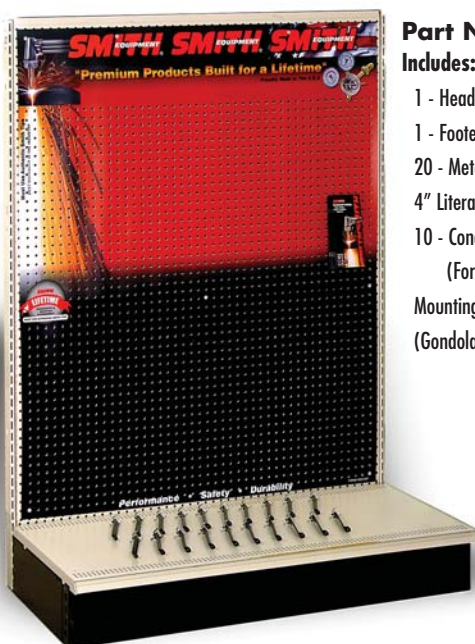


Smith Equipment Window Decal

Form No. 5185

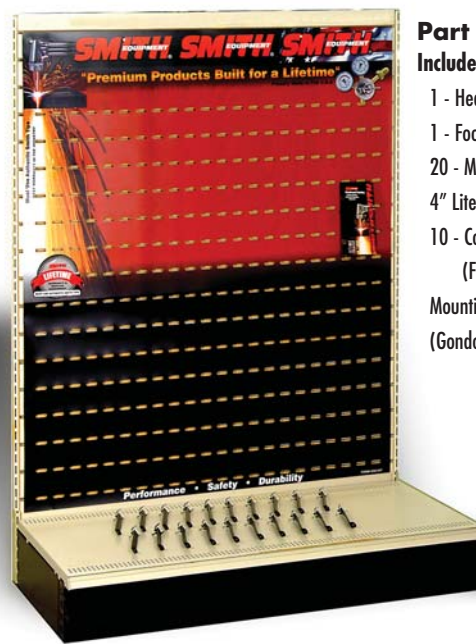
This 2-color Smith window decal is perfect for your vehicle or place of business.

Pegboard Display Materials Kit

**Part No. SM-2****Includes:**

- 1 - Header Backdrop (No. 5254peg)
- 1 - Footer Backdrop (No. 5255peg)
- 20 - Metal Hooks (No. 15135)
- 4" Literature Rack (No. 15831)
- 10 - Condensed Catalogs (Form No. 4301)
- Mounting Pins (No. 16177)
- (Gondola not included)

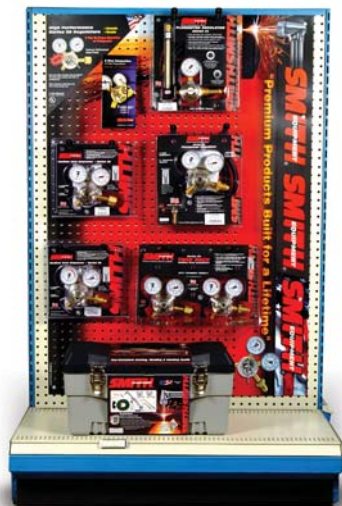
Slatboard Display Materials Kit

**Part No. SM-2SW****Includes:**

- 1 - Header Backdrop (No. 5254slat)
- 1 - Footer Backdrop (No. 5255slat)
- 20 - Metal Hooks (No. 15135)
- 4" Literature Rack (No. 15831)
- 10 - Condensed Catalogs (Form No. 4301)
- Mounting Tape (No. 16178)
- (Gondola not included)

Quick Start Series 30™ Regulator Endcap Merchandising Display

Attractive showroom display will help promote the Series 30 Regulators, Flowmeter Regulators and Flowgauges.



Backdrop sheet may be ordered separately for use with other products.

Part No. 5254peg

- Mounting Pins (No. 16177)
- 4" Literature Rack (No. 15831)

Part No. QS30-510

with CGA510 Acetylene Connections:

Includes:

- 2 - Oxygen Regulators (30-100-540)
- 2 - Acetylene Regulators (30-100-510)
- 2 - Flowgauges & 6' Hoses (31-50-580)
- 2 - Flowmeter Regulators (32-80-580)
- 2 - Twin Pack Oxy-Acet. Regulators (HTP2)
- 2 - Combination Torch Toolbox Outfits (MD-510T) Med. Duty
- (Gondola not included)

Part No. QS30-300

with CGA300 Acetylene Connections:

Includes:

- 2 - Oxygen Regulators (30-100-540)
- 2 - Acetylene Regulators (30-100-300)
- 2 - Flowgauges (31-50-580)
- 2 - Flowmeter Regulators (32-80-580)
- 2 - Twin Pack Oxy-Acet. Regulators (HTP5)
- 2 - Combination Torch Toolbox Outfits (MD-300T) Med. Duty
- (Gondola not included)

Showroom Display Example



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HEF - National Welders Supply Company;

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Versa-Torch

NOTE: Product specifications, data and availability of products in this catalog are subject to change without notice.



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